ALMANAC

XIII

PLANETARY

PHENOMENA OF

URANUS IN BCE

The almanac XIII contains a list of planetary phenomena of Uranus from the 6th millennium BCE to the 1st millennium BCE, from the 54th century BCE to the 1st century BCE.

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 1 Attention, astronomical year style is used: The year -5400 in astronomical counting style is the year 5401 BCE in historical counting style.

Attention, astronom	ical year style is used: Tl	ne year -5400	in astronomical co	unting style is the year	5401 BCE in historical of	counting style	
retrograde	-5400 Feb 28 j 14:00	-		direct	-5394 Aug 25 j 22:03		
min. Earth dist.	-5400 May 15 j 11:23	12° ≏ 36'30	18.71253 AU				
opposition	-5400 May 16 j 14:49	12° ≏ 33'45	0°22'20	conjunction	-5394 Dec 09 j 02:18	8°M46'13	0°-3'-24
direct	-5400 Jul 31 j 20:13	10° ≏ 36'07		minimum elong	-5394 Dec 09 j 02:17	8°M46'13	0°03'36
				behind sun begin	-5394 Dec 08 j 19:46	8°M45'18	
conjunction	-5400 Nov 14 j 16:52	14° ≏ 34'15	0°18'29	behind sun end	-5394 Dec 09 j 08:48	8°M47'08	
minimum elong	-5400 Nov 14 j 16:52	14° ≏ 34'15	0°18'26	max. Earth dist.	-5394 Dec 10 j 10:19	8°M50'50	21.02582 AU
max. Earth dist.	-5400 Nov 15 j 22:15	14° ≏ 38'34	20.74108 AU	retrograde	-5393 Mar 29 j 09:19	12°M48'15	
retrograde	-5399 Mar 04 j 01:16	18° ≏ 38'53		min. Earth dist.	-5393 Jun 14 j 09:49	10°M52'05	19.04280 AU
min. Earth dist.	-5399 May 19 j 21:40	16° ≏ 42'14	18.76963 AU	opposition	-5393 Jun 15 j 16:34	10°M49'01	0°-5'-46
opposition	-5399 May 21 j 03:06	16° ≏ 39'17	0°18'26	direct	-5393 Aug 30 j 05:27	8°M53'04	
direct	-5399 Aug 05 j 06:47	14° ≏ 41'56					
				conjunction	-5393 Dec 13 j 07:26	12°M45'09	0°-7'-2
conjunction	-5399 Nov 18 j 23:01			minimum elong	-5393 Dec 13 j 07:25	12°M45'09	0°07'15
minimum elong	-5399 Nov 18 j 23:01	18° ≏ 38'57	0°14'52	behind sun begin	-5393 Dec 13 j 01:22	12°M44'19	
behind sun begin	-5399 Nov 18 j 20:18	18° ≏ 38'34		behind sun end	-5393 Dec 13 j 13:29	12°M46'00	
behind sun end	-5399 Nov 19 j 01:45	18° ≏ 39'20		max. Earth dist.	-5393 Dec 14 j 15:13	12°M49'43	21.05743 AU
max. Earth dist.	-5399 Nov 20 j 05:20	18° ≏ 43'23	20.79693 AU		-5392 Jan 23 j 19:50	15°M₊	
retrograde	-5398 Mar 08 j 10:03	22° ≏ 43'01		retrograde	-5392 Apr 01 j 16:03		
min. Earth dist.	-5398 May 24 j 09:49				-5392 Jun 13 j 21:24	15°RM	
opposition	-5398 May 25 j 15:00		0°14'28	min. Earth dist.	-5392 Jun 17 j 19:42	14°M50'36	19.07159 AU
direct	-5398 Aug 09 j 15:16	18° ≏ 46'25		opposition	-5392 Jun 19 j 00:57		0°-9'-46
				direct	-5392 Sep 02 j 10:34	12°M51'50	
conjunction	-5398 Nov 23 j 04:47				-5392 Nov 15 j 09:56	15° M ₊	
minimum elong	-5398 Nov 23 j 04:46		0°11'16				
behind sun begin	-5398 Nov 22 j 23:54			conjunction	-5392 Dec 16 j 12:37		0°-10'-37
behind sun end	-5398 Nov 23 j 09:38			minimum elong	-5392 Dec 16 j 12:37		0°10'51
max. Earth dist.	-5398 Nov 24 j 11:57		20.85026 AU	behind sun begin	-5392 Dec 16 j 07:34		
retrograde	-5397 Mar 12 j 20:53			behind sun end	-5392 Dec 16 j 17:39		
min. Earth dist.	-5397 May 28 j 19:15			max. Earth dist.	-5392 Dec 17 j 19:44		21.08344 AU
opposition	-5397 May 30 j 02:07		0°10'27	retrograde	-5391 Apr 06 j 01:12		
direct	-5397 Aug 14 j 00:19	22° ≏ 49'42		min. Earth dist.	-5391 Jun 22 j 03:00		
				opposition	-5391 Jun 23 j 08:30		0°-13'-43
conjunction	-5397 Nov 27 j 10:22			direct	-5391 Sep 06 j 17:34	16°M49'49	
minimum elong	-5397 Nov 27 j 10:21		0°07'36				
behind sun begin	-5397 Nov 27 j 04:24			conjunction	-5391 Dec 20 j 17:37		
behind sun end	-5397 Nov 27 j 16:19			minimum elong	-5391 Dec 20 j 17:37		0°14'22
max. Earth dist.	-5397 Nov 28 j 18:11		20.90032 AU	behind sun begin	-5391 Dec 20 j 14:32		
	-5396 Jan 31 j 12:08			behind sun end	-5391 Dec 20 j 20:42		
retrograde	-5396 Mar 16 j 05:07	0°M47'49		max. Earth dist.	-5391 Dec 22 j 00:21		21.10374 AU
	-5396 May 01 j 12:23	30° R≏		retrograde	-5390 Apr 10 j 07:41		
min. Earth dist.	-5396 Jun 01 j 06:29		18.92443 AU	min. Earth dist.	-5390 Jun 26 j 11:54		
opposition	-5396 Jun 02 j 12:38	28° ≏ 48'26	0°06'24	opposition	-5390 Jun 27 j 15:49		0°-17'-34
direct	-5396 Aug 17 j 07:43	26° £ 51'56		direct	-5390 Sep 10 j 21:41	20°11L47'08	
	-5396 Nov 17 j 07:53	0°M₊			5000 5 04:00 00	2.40M 2.5152	00 151 25
	520CN 20:15.40	0070 46104	0004104	conjunction	-5390 Dec 24 j 22:30		0°-17'-35
conjunction	-5396 Nov 30 j 15:49	0°M46'04		minimum elong	-5390 Dec 24 j 22:30		0°17'51
minimum elong	-5396 Nov 30 j 15:49	0°M46'04	0°03'56	max. Earth dist.	-5390 Dec 26 j 04:36		21.11896 AU
behind sun begin	-5396 Nov 30 j 09:20	0°M45'09		retrograde	-5389 Apr 14 j 16:01		00 211 10
behind sun end	-5396 Nov 30 j 22:18	0°M46'59	20.04679 ATT	opposition	-5389 Jul 01 j 22:34		0°-21'-19
max. Earth dist.	-5396 Dec 01 j 23:55		20.94678 AU	min. Earth dist.	-5389 Jun 30 j 18:27		19.12514 AU
retrograde	-5395 Mar 20 j 15:46	4°M48'46	0°02'20	direct	-5389 Sep 15 j 03:56	24 11643 30	
opposition	-5395 Jun 06 j 22:26	2°M49'27		:	5290 D 20 : 02-24	200M 24/21	09 201 56
min. Earth dist.	-5395 Jun 05 j 15:11		18.96874 AU	conjunction	-5389 Dec 29 j 03:34		0°-20'-56
direct	-5395 Aug 21 j 15:42	0°M53'10		minimum elong	-5389 Dec 29 j 03:34		0°21'11
agniumation	5205 Dag 04 : 21:01	40m 40122	0°00'20	max. Earth dist.	-5389 Dec 30 j 09:14	28°IIL38'34 0° ⋌ ¹	21.12930 AU
conjunction minimum elong	-5395 Dec 04 j 21:01	4°M46'32		ratra ara da	-5388 Jan 23 j 18:29		
_	-5395 Dec 04 j 21:02	4°M46'32	0 00 09	retrograde	-5388 Apr 17 j 22:36	2° x ⁷ 35'24	10 12221 ATT
behind sun begin	-5395 Dec 04 j 14:33	4°M45'38		min. Earth dist.	-5388 Jul 04 j 02:21		19.13331 AU
behind sun end	-5395 Dec 05 j 03:30	4°M47'27	20 08870 ATT	opposition	-5388 Jul 05 j 04:50	0° ₹ 35′56	0°-24'-58
max. Earth dist. desc. node	-5395 Dec 06 j 05:18 -5394 Jan 06 j 07:13	6°M34'55	20.98870 AU	direct	-5388 Jul 20 j 08:26 -5388 Sep 18 j 07:39	30° R ጤ 28° ጤ 40'05	
retrograde	-5394 Jan 06 j 07:13 -5394 Mar 24 j 23:03	8°M48'53		direct	-5388 Sep 18 j 07:39	28°11640'05 0° √	
min. Earth dist.	-5394 Mar 24 j 23:03 -5394 Jun 10 j 01:43		19.00833 AU		-3300 INOV 14 J 12:24	υ χ .	
opposition	-5394 Jun 10 j 01:43	6°11L32'38		conjunction	-5387 Jan 01 j 08:44	20.7ZU120	0°-24'-10
оррознин	3377 Juli 11 J U / .49	0 116 4 73/	U =1 = 1 J	Conjunction	5567 Jan 101 J 00.44	2 × 30 48	0 -24-10

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5387 in astronomical counting style is the year 5388 BCE in historical counting style. -5387 Jan 01 i 08:44 2°**∡**30'28 0°24'28 minimum elong -5379 Feb 02 i 13:56 4°る08'08 0°45'19 minimum elong 4°る10'40 21.03182 AU -5387 Jan 02 j 13:33 2°**₹**34'33 21.13541 AU max. Earth dist. -5379 Feb 03 j 07:46 max Earth dist -5387 Apr 22 j 06:42 6°**х** 31'30 -5379 May 24 j 22:57 8°**ح**11'10 retrograde retrograde -5387 Jul 08 j 08:09 6°**ප**11'23 0°-50'-47 min. Earth dist. 4°**✗**34'38 19.13734 AU -5379 Aug 10 j 05:38 opposition 4°**∡**°31'58 -5387 Jul 09 j 10:44 -5379 Aug 09 j 14:19 opposition 0°-28'-30 min. Earth dist. 6°る12'57 19.01508 AU -5387 Sep 22 j 12:28 -5379 Oct 23 j 21:42 direct 2°**х** 36′04 direct 4°る14'38 6°**₹**26'25 0°-27'-18 -5378 Feb 06 j 22:50 8°**る**08'22 conjunction -5386 Jan 05 j 13:53 conjunction 0°-46'-46 -5378 Feb 06 j 22:50 minimum elong -5386 Jan 05 j 13:53 6°**х** 26′25 0°27'36 minimum elong 8°**る**08'22 0°47'06 max. Earth dist. -5386 Jan 06 j 18:10 6°**∡**30'25 21.13732 AU max. Earth dist. -5378 Feb 07 j 14:52 8°る10'39 20.99635 AU retrograde -5386 Apr 26 j 13:12 10°**₹**27'30 retrograde -5378 May 29 j 06:24 12°る11'50 -5386 Jul 13 j 16:29 -5378 Aug 14 j 11:21 10°**♂**11'56 opposition 8°**҂**¹27'55 0°-31'-53 opposition 0°-52'-38 -5386 Jul 12 j 15:30 -5378 Aug 13 j 22:37 min. Earth dist. 8°**尽**30'26 19.13731 AU min. Earth dist. 10°る13'15 18.97687 AU direct -5386 Sep 26 j 16:18 6°**х** 31′59 direct -5378 Oct 28 j 02:04 8°る14'55 conjunction -5385 Jan 09 j 19:26 10° ₹22'24 0°-30'-18 conjunction -5377 Feb 11 j 08:28 12°**る**09'26 0°-48'-19 minimum elong -5385 Jan 09 j 19:26 10° **₹**22'24 0°30'36 minimum elong -5377 Feb 11 j 08:28 12°る09'26 0°48'39 max. Earth dist. -5385 Jan 10 j 22:39 10° **₹** 26'15 21.13546 AU max. Earth dist. -5377 Feb 11 j 21:51 12°る11'21 20.95573 AU retrograde -5385 Apr 30 j 21:39 14° ₹23'36 retrograde -5377 Jun 02 j 16:38 16°る13'23 opposition -5385 Jul 17 j 21:53 12°**尽** 23'58 0°-35'-8 opposition -5377 Aug 18 j 16:58 14°る13'20 0°-54'-13 min. Earth dist. -5385 Jul 16 j 21:01 12° ₹26'29 19.13347 AU min. Earth dist. -5377 Aug 18 j 05:41 14°る14'30 18.93377 AU direct -5385 Sep 30 i 20:15 10° ₹27'59 direct -5377 Nov 01 j 08:15 12°る15'59 conjunction -5384 Jan 14 i 01:18 14° ₹ 18'36 0°-33'-10 conjunction -5376 Feb 15 i 18:45 16°**⋜**11'23 0°-49'-38 -5384 Jan 14 i 01:18 14° **₹** 18'35 0°33'29 minimum elong -5376 Feb 15 i 18:45 16°る11'23 0°49'57 minimum elong -5384 Jan 15 j 03:41 14° ₹22'20 21.12954 AU max. Earth dist. -5376 Feb 16 j 06:20 16°る13'02 20.91028 AU max Earth dist -5384 May 04 j 04:16 18° ₹ 19'57 retrograde -5376 Jun 06 j 01:15 20°る15'49 retrograde -5384 Jul 20 j 04:17 16° **₹**22'39 19.12548 AU -5376 Aug 21 j 22:54 18°る15'38 0°-55'-33 min. Earth dist. opposition -5384 Jul 21 j 03:16 16° ₹ 20'20 0°-38'-13 -5376 Aug 21 j 14:07 18° 중16'32 18.88616 AU min. Earth dist. opposition -5384 Oct 03 j 23:58 14° ₹24'18 -5376 Nov 04 j 13:24 16°る17'56 direct direct -5375 Feb 19 j 05:30 20° 14'18 0°-50'-42 -5383 Jan 17 j 07:33 18° **₹** 15'11 0°-35'-53 conjunction conjunction -5383 Jan 17 j 07:33 18° **₹** 15'11 0°36'12 -5375 Feb 19 j 05:30 20°중14'18 0°51'02 minimum elong minimum elong -5375 Feb 19 j 14:25 20° **조**15'34 20.86084 AU -5383 Jan 18 j 08:29 18° ₹ 18'43 21.11957 AU max. Earth dist. max. Earth dist. -5383 May 08 j 13:18 22° ₹ 16'47 -5375 Jun 10 j 11:47 24°정19'17 retrograde retrograde -5383 Jul 24 j 09:54 20° ₹ 19'25 19.11330 AU -5375 Aug 26 j 04:56 22° **전**18'56 0°-56'-36 min. Earth dist. opposition -5383 Jul 25 j 08:21 20° **₹**17'09 0°-41'-8 -5375 Aug 25 j 21:30 22°**궁**19'42 18.83494 AU opposition min. Earth dist. direct -5383 Oct 08 j 04:11 18°**尽**21'02 direct -5375 Nov 08 j 20:02 20°♂20'51 -5374 Feb 23 j 16:59 24°♂18'16 0°-51'-31 conjunction -5382 Jan 21 j 14:17 22° ₹ 12'19 0°-38'-27 conjunction minimum elong -5382 Jan 21 j 14:16 22° ₹ 12'19 0°38'47 minimum elong -5374 Feb 23 j 16:59 24°정18'16 0°51'50 max. Earth dist. -5382 Jan 22 j 14:05 22° ₹ 15'42 21.10510 AU max. Earth dist. -5374 Feb 24 j 00:19 24° **전**19'19 20.80796 AU retrograde -5382 May 12 j 20:00 26° **₹** 14'13 -5374 Jun 14 j 21:27 28°₹23'52 retrograde -5382 Jul 29 j 13:38 24° **₹** 14'35 0°-43'-52 -5374 Aug 30 j 11:19 26°**ට**23'22 0°-57'-23 opposition opposition min. Earth dist. -5382 Jul 28 j 17:24 24° **₹** 16'38 19.09652 AU min. Earth dist. -5374 Aug 30 j 06:11 26°**⋜**23'54 18.78061 AU -5382 Oct 12 j 07:21 22°**尽** 18'23 -5374 Nov 13 j 01:50 24°る24'56 direct direct -5373 Feb 28 i 05:06 28°₹23'28 0°-52'-5 conjunction -5381 Jan 25 j 21:28 26° ₹ 10'09 0°-40'-49 conjunction minimum elong -5381 Jan 25 j 21:28 26° ₹10'09 0°41'09 minimum elong -5373 Feb 28 i 05:06 28°る23'28 0°52'24 max. Earth dist. -5381 Jan 26 j 19:24 26° ₹13'15 21.08603 AU max. Earth dist. -5373 Feb 28 i 09:42 28°₹24'08 20.75243 AU -5381 Apr 24 j 12:58 0°ಕ -5373 Mar 29 j 00:03 0°≈ -5381 May 17 j 05:55 0°**궁**12'23 retrograde -5373 Jun 19 j 09:06 2°≈29'43 retrograde -5381 Jun 08 j 23:21 30°R ⊀ -5373 Sep 03 j 18:02 0°≈29'05 0°-57'-53 opposition 0°≈29'28 18.72384 AU opposition -5381 Aug 02 j 18:52 28° ₹ 12'43 0°-46'-23 min. Earth dist. -5373 Sep 03 j 14:17 -5373 Sep 15 j 11:37 30°R පි -5381 Aug 01 j 23:39 28° ₹ 14'40 19.07485 AU min. Earth dist. direct -5381 Oct 16 j 12:29 26° ₹ 16'23 direct -5373 Nov 17 j 09:14 28°**⋜**30'17 -5380 Jan 27 j 15:49 -5372 Jan 16 j 23:44 0°≈ -5380 Jan 30 j 05:26 0°る08'44 0°-43'-1 -5372 Mar 03 j 18:09 2°≈30'03 0°-52'-24 conjunction conjunction -5380 Jan 30 j 05:26 0°る08'44 0°43'21 -5372 Mar 03 j 18:09 minimum elong minimum elong 2°≈30'03 0°52'41 -5380 Jan 31 j 01:43 0°**궁**11'37 21.06162 AU max. Earth dist. max. Earth dist. -5372 Mar 03 j 21:13 2°≈30'30 20.69444 AU retrograde -5380 May 20 j 12:42 4°る11'21 retrograde -5372 Jun 22 j 19:53 6°≈37'00 min. Earth dist. -5380 Aug 05 j 07:34 2°る13'20 19.04771 AU opposition -5372 Sep 07 j 01:09 4°**≈**36'16 0°-58'-6 opposition -5380 Aug 06 j 00:10 2°**る**11'39 0°-48'-42 min. Earth dist. -5372 Sep 06 j 23:37 4°≈36'25 18.66482 AU direct -5380 Oct 19 j 15:51 0°る15'08 direct -5372 Nov 20 j 16:00 2°≈37'06

conjunction

-5371 Mar 08 j 07:50 6°≈38'12 0°-52'-26

-5379 Feb 02 j 13:56 4°る08'08 0°-45'00

conjunction

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5371 in astronomical counting style is the year 5372 BCE in historical counting style. -5371 Mar 08 i 07:51 6°≈38'12 0°52'43 conjunction -5363 Apr 13 j 06:35 10°**)** 52'27 0°-42'-37 minimum elong -5371 Mar 08 i 08:01 6°≈38'13 20.63463 AU -5363 Apr 13 j 06:35 10°**)** € 52'27 max. Earth dist. minimum elong 0°42'47 -5371 Jun 27 j 08:47 -5363 Aug 01 j 10:59 15°**₭**06'57 retrograde 10°≈45'54 retrograde -5371 Sep 11 j 08:48 8°≈45'04 0°-58'00 -5363 Oct 14 j 21:18 13° ¥ 05'23 0°-46'00 opposition opposition -5371 Sep 11 j 08:44 -5363 Oct 15 j 14:17 13°**米**03'34 18.05394 AU min. Earth dist. 8°≈45'04 18.60414 AU min. Earth dist. -5371 Nov 25 j 00:14 direct 6°≈45'34 direct -5363 Dec 28 j 19:23 11°**米**02'45 max. Earth dist. -5362 Apr 17 j 07:20 15° **X** 14′50 20.01690 AU -5370 Mar 12 j 22:21 10°≈48'03 0°-52'-12 conjunction minimum elong -5370 Mar 12 j 22:21 10°≈48'03 0°52'29 conjunction -5362 Apr 18 j 04:16 15° **★** 17'57 0°-40'-8 max. Earth dist. -5370 Mar 12 j 21:11 10°≈47'53 20.57303 AU minimum elong -5362 Apr 18 j 04:16 15°**米** 17'57 0°40'15 retrograde -5370 Jul 01 j 21:15 14°≈56'34 retrograde -5362 Aug 06 j 05:03 19°**米** 33'16 -5362 Oct 19 j 11:05 17° ★31'33 0°-43'-7 opposition -5370 Sep 15 j 17:04 12°≈55'40 0°-57'-37 opposition -5362 Oct 20 j 05:25 17° ****29'34 17.98012 AU min. Earth dist. -5370 Sep 15 j 19:11 12°≈55'27 18.54167 AU min. Earth dist. direct -5370 Nov 29 j 08:19 10°≈55'51 direct -5361 Jan 02 j 11:17 15°**∺**28'28 max. Earth dist. -5361 Apr 22 j 02:32 19°**)** 41'40 19.94349 AU conjunction -5369 Mar 17 j 13:51 14°≈59'47 0°-51'-42 minimum elong -5369 Mar 17 j 13:51 14°≈59'47 0°51'57 conjunction -5361 Apr 23 j 02:41 19°**)** 45'17 0°-37'-24 max. Earth dist. -5369 Mar 17 j 09:30 14°≈59'09 20.50986 AU minimum elong -5361 Apr 23 j 02:41 19° **★**45'17 -5369 Mar 17 j 15:18 15°≈ retrograde -5361 Aug 10 j 22:16 24° **H** 01'25 retrograde -5369 Jul 06 j 11:24 19°≈09'08 opposition -5361 Oct 24 j 01:36 21° ¥ 59'32 0°-39'-57 opposition -5369 Sep 20 i 01:44 17°≈08'12 0°-56'-54 min. Earth dist. -5361 Oct 24 j 22:05 21° + 57'19 17.90741 AU min. Earth dist. -5369 Sep 20 i 05:45 17°≈07'46 18.47762 AU direct -5360 Jan 07 i 04:09 19°**¥** 55'58 direct -5369 Dec 03 i 17:38 15°≈08'02 max. Earth dist. -5360 Apr 26 j 01:08 24° ¥ 10'42 19.87154 AU conjunction -5368 Mar 21 j 06:29 19°≈13'32 0°-50'-54 conjunction -5360 Apr 27 i 01:56 24° \(\) 14'26 0°-34'-25 -5368 Mar 21 i 06:29 19°≈13'32 0°51'09 -5360 Apr 27 j 01:56 24° **€** 14'26 minimum elong minimum elong 0°34'29 -5368 Mar 21 j 00:35 19°≈12'40 -5360 Aug 14 j 17:25 28°**₭**31'22 max. Earth dist. 20 44480 AU retrograde -5368 Jul 10 j 01:55 23°≈23'44 -5360 Oct 27 j 17:01 26° **★**29'21 0°-36'-32 retrograde opposition -5368 Sep 23 j 11:15 21°≈22'45 0°-55'-53 -5360 Oct 28 j 14:15 26° ****27'02 17.83646 AU opposition min. Earth dist. -5368 Sep 23 j 17:33 21°≈22'05 18.41156 AU -5359 Jan 10 j 22:14 24°**₭**25'22 min. Earth dist. direct max. Earth dist. -5368 Dec 07 j 03:28 19°≈22'16 -5359 Apr 30 j 22:13 28°**)** 41'17 19.80177 AU direct -5367 Mar 25 j 23:44 23°≈29'19 0°-49'-49 -5359 May 02 j 01:32 28° ¥45'24 0°-31'-13 conjunction conjunction -5367 Mar 25 j 23:45 23°≈29'19 0°50'02 -5359 May 02 j 01:32 28° ★45'24 0°31'15 minimum elong minimum elong -5367 Mar 25 j 14:18 23°≈27'56 20.37778 AU -5359 May 22 j 21:13 $0^{\circ}\Upsilon$ max. Earth dist. -5367 Jul 14 j 17:08 27°≈40'25 -5359 Aug 19 j 11:49 3°**Y**03′08 retrograde retrograde 1°**Υ**01'00 0°-32'-51 -5359 Nov 01 j 09:20 opposition -5367 Sep 27 j 21:26 25°≈39'21 0°-54'-32 opposition min. Earth dist. -5367 Sep 28 j 05:50 25°≈38'28 18.34354 AU min. Earth dist. -5359 Nov 02 j 08:26 0°**Υ**58'29 17.76820 AU direct -5367 Dec 11 j 14:08 23°≈38'29 -5359 Nov 25 j 19:48 30°R ₩ direct -5358 Jan 15 j 16:42 28° **∺** 56'36 conjunction -5366 Mar 30 j 18:13 27°≈47'09 0°-48'-27 -5358 Mar 06 j 15:29 $0^{\circ}\Upsilon$ -5366 Mar 30 j 18:13 27°≈47'09 0°48'39 max. Earth dist. -5358 May 05 j 22:20 3°Υ 14'02 19.73502 AU minimum elong max. Earth dist. -5366 Mar 30 j 07:10 27°≈45'32 20.30863 AU -5366 May 09 j 08:34 0°**光** -5358 May 07 j 02:06 3°Υ18'14 0°-27'-47 conjunction -5366 Jul 19 j 09:24 1°**)** 59'07 -5358 May 07 j 02:06 3°**Y**18'14 0°27'49 retrograde minimum elong -5366 Oct 01 j 13:19 30°R≈ -5358 Aug 24 i 08:37 7°**Y**36'44 retrograde -5366 Oct 02 j 08:17 29°≈57'59 0°-52'-52 5°**Υ**'34'32 0°-28'-56 opposition opposition -5358 Nov 06 j 02:18 5°**Υ**31'59 17.70308 AU min. Earth dist. -5366 Oct 02 j 18:54 29°≈56'51 18.27333 AU min. Earth dist. -5358 Nov 07 i 01:42 3°**Y**29'47 direct -5366 Dec 16 j 02:06 27°≈56'43 direct -5357 Jan 20 j 12:47 -5365 Feb 25 j 23:47 0°**₩** max. Earth dist. -5357 May 10 j 21:34 7°**Υ**48'27 19.67163 AU -5365 Apr 04 j 13:29 2°\mathbf{H}07'00 0°-46'-47 -5357 May 12 j 03:19 7°Υ52'58 0°-24'-10 conjunction conjunction -5365 Apr 04 j 13:29 2°\colon 0°46'58 -5357 May 12 j 03:19 7°**Y**′52'58 0°24'10 minimum elong minimum elong 2°**₭**04'48 20.23750 AU -5357 Aug 29 j 04:35 12°**Υ**12'14 max. Earth dist. -5365 Apr 03 j 22:34 retrograde -5357 Nov 10 j 20:24 10°**Υ**'09'59 0°-24'-49 retrograde -5365 Jul 24 j 01:16 6°**¥**19'50 opposition -5357 Nov 11 j 21:39 10°**Υ**07'14 17.64163 AU opposition -5365 Oct 06 j 19:56 4°**)** 18'34 0°-50'-53 min. Earth dist. -5356 Jan 25 j 08:36 8°**Υ**04'55 min. Earth dist. -5365 Oct 07 j 08:51 4°**升**17'11 18.20133 AU direct -5365 Dec 20 j 14:39 2°\ 16'51 max. Earth dist. -5356 May 14 j 22:56 12°**Υ**25'01 19.61206 AU direct -5364 Apr 08 j 09:44 6°**¥**28'47 0°-44'-50 -5356 May 16 j 05:06 12° Υ 29'38 0°-20'-22 conjunction conjunction -5364 Apr 08 j 09:44 -5356 May 16 j 05:06 12°**Υ**29'38 minimum elong 6°**¥**28'47 0°45'00 minimum elong 0°20'21 max. Earth dist. -5364 Apr 07 j 17:23 6°**¥**26'22 20.16465 AU retrograde -5356 Sep 02 j 03:18 16°**Y**49'38 retrograde -5364 Jul 27 j 18:39 10° ★42'26 opposition -5356 Nov 14 j 15:16 14°**Υ**47'23 0°-20'-30 opposition -5364 Oct 10 j 08:14 8°**)**41'03 0°-48'-36 min. Earth dist. -5356 Nov 15 j 16:29 14°**Υ**44'37 17.58391 AU min. Earth dist. -5364 Oct 10 j 22:59 8°**)** 39'28 18.12785 AU direct -5355 Jan 29 j 06:47 12°**Υ**42'03 -5364 Dec 24 j 04:40 6°\ 38'54 max. Earth dist. -5355 May 20 j 00:06 17°**Υ**03'24 19.55621 AU max. Earth dist.

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Earth dist. -5348 Jun 23 j 00:37 20°**8**15'23 19.27328 AU -5354 May 26 j 10:27 21° **Y**48'41 0° -12'-19 -5348 Jun 24 j 10:15 20°**8**20'41 conjunction conjunction 0°13'30 -5354 May 26 j 10:27 21°**Υ**48'41 -5348 Jun 24 j 10:14 20°**8**20'41 minimum elong 0°12'13 minimum elong 0°13'42 -5348 Jun 24 j 06:42 20°**8**20'09 behind sun begin -5354 May 26 j 06:00 21°**Υ**48'01 behind sun begin -5354 May 26 j 14:53 21°**Υ**49'21 -5348 Jun 24 j 13:47 20°**8**21'14 behind sun end behind sun end -5354 Sep 12 j 00:55 26°**Υ**10'02 -5348 Oct 10 j 01:06 24°844'23 retrograde retrograde opposition -5354 Nov 24 j 07:50 24°**Υ**'07'48 0°-11'-23 opposition -5348 Dec 22 j 05:06 22°**8**42'04 min. Earth dist. -5354 Nov 25 j 10:44 24°**Υ**04'52 17.47979 AU min. Earth dist. -5348 Dec 23 j 09:17 22°**8**38'59 17.26236 AU direct $-5353 \text{ Feb } 08 \text{ j } 04:11 \quad 22^{\circ} \Upsilon 02'01$ direct -5347 Mar 08 j 16:03 20°**8**35'12 max. Earth dist. -5353 May 30 j 05:11 26°**Υ**25'47 19.45558 AU max. Earth dist. -5347 Jun 28 j 06:42 25°**8**03'55 19.25200 AU conjunction -5353 May 31 j 13:58 26°**Y**30'52 conjunction -5347 Jun 29 j 14:16 25°**8**08'55 minimum elong -5353 May 31 j 13:58 26°**Υ**30'52 0°08'01 minimum elong -5347 Jun 29 j 14:16 25°**8**08'54 behind sun begin -5353 May 31 i 07:57 26°**Y**29'57 retrograde -5347 Oct 15 j 00:44 29°832'41 behind sun end -5353 May 31 i 20:00 26°**Y**31'47 opposition -5347 Dec 27 i 06:44 27°\(\begin{align*} 230'22 \] 0°21'55 -5353 Aug 03 j 22:55 0°8 min. Earth dist. -5347 Dec 28 i 10:36 27°827'19 17.24416 AU retrograde -5353 Sep 16 j 23:07 0°**ප**52'48 direct -5346 Mar 13 j 20:40 25° **2**23'25 -5353 Nov 01 j 02:09 30°R℃ max. Earth dist. -5346 Jul 03 j 10:22 29°852'24 19.23706 AU -5353 Nov 29 j 05:35 28°**Υ**'50'35 0°-6'-38 opposition -5353 Nov 30 j 10:11 28°**Y**47'28 -5346 Jul 04 j 17:55 29°**8**57'24 min. Earth dist. 17 43306 AU conjunction 0°21'42 -5352 Feb 13 i 03:04 26° \dagger44'35 -5346 Jul 04 j 17:55 29°**8**57'24 direct minimum elong 0°21'57 -5346 Jul 05 j 10:24 $0^{\circ}II$ -5352 May 15 j 12:34 0°8 -5352 Jun 03 j 08:00 1°809'20 19.41070 AU -5346 Oct 20 j 01:02 4°**Ⅲ**21'13 max. Earth dist. retrograde -5345 Jan 01 j 08:53 opposition 2°**I**18'53 0°26'22 -5345 Jan 02 j 11:31 -5352 Jun 04 j 17:45 1°814'36 0°-3'-51 conjunction min. Earth dist. 2°**Ц**15'59 17.23263 AU -5352 Jun 04 j 17:45 -5345 Mar 19 j 01:56 1°**8**14'36 0°03'43 direct 0°**Ⅱ**11'53 minimum elong -5352 Jun 04 j 11:04 1°**8**13'35 behind sun begin -5352 Jun 05 j 00:27 1°**8**15'37 -5345 Jul 09 j 21:20 4°II46'01 0°25'35 behind sun end conjunction -5352 Sep 21 j 00:27 5°**8**37'02 -5345 Jul 09 j 21:20 4°II46'01 0°25'51 retrograde minimum elong -5352 Dec 03 j 04:04 3°**8**34'49 0°-1'-50 -5345 Jul 08 j 16:24 4°**Д**41'26 19.22893 AU opposition max. Earth dist. min. Earth dist. -5352 Dec 04 j 08:10 3°**8**31'45 17.39006 AU retrograde -5345 Oct 25 j 01:33 9°**Ⅱ**09'48 direct -5351 Feb 17 j 04:57 1°**8**28'37 opposition -5344 Jan 06 j 11:32 7°**I**107'30 0°30'37 asc. node -5351 Apr 23 j 22:15 3°**8**15'27 min. Earth dist. -5344 Jan 07 j 12:52 7°**П**04'45 17.22794 AU direct -5344 Mar 23 j 07:21 5°**Ⅱ**00'33 -5351 Jun 09 j 21:43 5°859'40 0°00'34 max. Earth dist. -5344 Jul 12 j 20:07 9°**I**30'10 19.22788 AU conjunction -5351 Jun 09 j 21:45 5°**8**59'40 0°00'44 minimum elong -5351 Jun 09 j 15:00 5°858'38 -5344 Jul 14 j 00:19 9°**Ц**34'39 0°29'18 behind sun begin conjunction -5351 Jun 10 j 04:29 6°800'41 -5344 Jul 14 j 00:19 9°**Ⅲ**34'39 behind sun end minimum elong 0°29'35 -5351 Jun 08 j 12:18 5°854'26 19.36955 AU -5344 Oct 29 і 02:08 13°**Д**58'20 max. Earth dist. retrograde -5351 Sep 25 j 23:32 10°\(22'32\) retrograde opposition -5343 Jan 10 j 14:29 11°**Д**56'07 0°34'40 8°820'19 0°03'00 opposition -5351 Dec 08 i 03:27 min. Earth dist. -5343 Jan 11 i 14:30 11°**Д**53'31 17.23056 AU min. Earth dist. -5351 Dec 09 i 08:48 8°**と**17'06 17.35098 AU direct -5343 Mar 28 i 11:49 9°**Ⅱ**49'14 direct -5350 Feb 22 i 05:33 6°813'55 max. Earth dist. -5343 Jul 18 j 01:25 14°**Д**19'08 19.23406 AU max. Earth dist. -5350 Jun 13 j 15:33 10°840'27 19.33265 AU -5343 Jul 19 i 02:55 14°**Ⅲ**23'11 0°32'49 conjunction -5350 Jun 15 j 01:56 10°\(\alpha 45'51 \) 0°04'57 -5343 Jul 19 j 02:55 14°**Ⅲ**23'11 conjunction minimum elong 0°33'06 -5350 Jun 15 j 01:55 10°**8**45'51 -5343 Nov 03 j 03:40 18°**Д**46'42 minimum elong 0°05'07 retrograde -5342 Jan 15 j 17:43 16°**Ⅲ**44'36 0°38'28 behind sun begin -5350 Jun 14 j 19:23 10°**8**44'51 opposition behind sun end -5350 Jun 15 j 08:28 10°846'51 min. Earth dist. -5342 Jan 16 j 15:46 16°**II**42'13 17.24001 AU -5350 Sep 13 j 02:59 15°8 direct -5342 Apr 02 j 16:55 14°**Д**37'53 -5350 Oct 01 j 00:55 15°809'04 max. Earth dist. -5342 Jul 23 j 04:53 19°**Д**07'41 19.24688 AU retrograde -5350 Oct 18 j 23:53 15°R₩ -5350 Dec 13 j 03:13 13°**8**06'49 0°07'50 -5342 Jul 24 j 05:06 19°**Ⅲ**11'32 0°36'06 opposition conjunction -5342 Jul 24 j 05:05 19°**Ⅲ**11'31 min. Earth dist. -5350 Dec 14 j 07:54 13°**8**03'41 17.31633 AU minimum elong 0°36'25 direct -5349 Feb 27 j 08:50 11°**8**00'14 retrograde -5342 Nov 08 j 04:25 23°**Ⅱ**34'48 -5341 Jan 20 j 21:11 21°**Ⅲ**32'50 -5349 Jun 11 j 12:26 15°**8** opposition 0°42'00 max. Earth dist. -5349 Jun 18 j 21:07 15°**8**27'43 19.30033 AU min. Earth dist. -5341 Jan 21 j 18:13 21°**Ⅲ**30'34 17.25609 AU direct -5341 Apr 07 j 21:01 19°**Ⅲ**26'19 max. Earth dist. -5341 Jul 28 j 09:00 23°**Д**56'02 19.26609 AU conjunction minimum elong

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Earth dist. -5332 Mar 05 j 03:36 4°**Ω**03'10 17.61792 AU -5332 May 21 j 10:00 conjunction -5340 Aug 02 j 07:50 28°**Ⅱ**46'57 0°41'54 direct 1°**Ω**59'24 0°42'12 minimum elong -5340 Aug 02 j 07:50 28°**Ⅱ**46'57 $6^{\circ}\Omega 22'23 \quad 0^{\circ}52'17$ -5340 Aug 21 j 16:01 0ಂತಾ conjunction -5332 Sep 08 j 12:45 -5340 Nov 17 j 06:18 -5332 Sep 08 j 12:45 retrograde 3°509'33 minimum elong 6°**\O22'23** 0°52'34 -5339 Jan 30 j 04:50 -5332 Sep 08 j 12:21 opposition 1°**©**07'51 0°48'09 max. Earth dist. 6°**\$\Omega**22'19 19.64758 AU min. Earth dist. -5339 Jan 30 j 22:28 1°505'58 17.30563 AU retrograde -5332 Dec 24 j 15:21 10°**Ω**39'42 -5339 Feb 27 j 01:37 30°R∏ opposition -5331 Mar 10 j 03:14 8°**Ω**38'40 0°58'09 direct -5339 Apr 17 j 06:26 29°**Ⅲ**01'51 min. Earth dist. -5331 Mar 10 j 02:50 8°**Ω**38'42 17.67842 AU -5339 Jun 03 j 22:06 0ಂತಾ direct -5331 May 26 j 10:07 6°**£**35′06 conjunction -5339 Aug 07 j 08:20 3°533'38 0°44'22 conjunction -5331 Sep 13 j 06:11 $10^{\circ}\Omega$ 56'30 0° 52'05 minimum elong -5339 Aug 07 j 08:19 3°533'38 0°44'40 minimum elong -5331 Sep 13 j 06:11 $10^{\circ}\Omega$ 56'30 0° 52'19 max. Earth dist. -5339 Aug 06 j 14:25 3°930'47 19.32095 AU max. Earth dist. -5331 Sep 13 j 07:22 10° Ω 56'41 19.71010 AU retrograde -5339 Nov 22 i 07:07 7°955'46 -5331 Dec 07 i 13:00 15°Ω opposition -5338 Feb 04 i 08:27 5°954'12 0°50'43 retrograde -5331 Dec 29 i 11:37 15° Ω 13'01 min. Earth dist. -5338 Feb 04 i 23:19 5°**9**52'37 17.33796 AU -5330 Jan 20 j 21:11 15°RΩ direct -5338 Apr 22 j 12:17 3°5548'28 opposition -5330 Mar 15 j 03:38 $13^{\circ}\Omega$ 12'05 0° 57'43 min. Earth dist. -5330 Mar 15 j 00:08 13° Ω 12'26 17.74287 AU -5338 Aug 12 j 08:15 8°919'21 0°46'30 direct -5330 May 31 j 09:46 $11^{\circ}\Omega$ 08'56 conjunction -5338 Aug 12 j 08:15 8°919'21 0°46'48 -5330 Sep 10 j 05:58 15°Ω minimum elong -5338 Aug 11 j 16:44 8°516'54 19.35552 AU max. Earth dist. -5338 Nov 27 j 06:02 12°540'58 -5330 Sep 17 j 22:53 15°**Ω**28'45 0°51'32 retrograde conjunction -5337 Feb 09 j 12:18 10°539'30 0°52'55 -5330 Sep 17 j 22:53 $15^{\circ}\Omega$ 28'45 $0^{\circ}51'46$ opposition minimum elong -5330 Sep 18 j 03:52 15° Ω29'31 19.77634 AU -5337 Feb 10 j 02:16 10°538'01 17.37473 AU min. Earth dist. max. Earth dist. -5337 Apr 27 j 16:24 -5329 Jan 03 j 06:38 19°**Ω**44'25 direct 8°934'02 retrograde -5329 Mar 20 j 03:38 17° **Q**43'38 0° 56'55 opposition -5337 Aug 17 j 07:09 13°503'52 0°48'19 -5329 Mar 19 j 21:49 17° Ω 44'15 17.81067 AU conjunction min. Earth dist. -5337 Aug 17 j 07:09 13°503'52 0°48'38 -5329 Jun 05 j 08:11 15° Ω 40'58 minimum elong direct -5337 Aug 16 j 17:18 13°501'41 19.39443 AU max. Earth dist. retrograde -5337 Dec 02 j 05:57 17°524'54 conjunction -5329 Sep 22 j 14:25 19°Ω59'08 0°50'41 opposition -5336 Feb 14 j 15:49 15°523'31 0°54'45 minimum elong -5329 Sep 22 j 14:25 19°**Ω**59'08 0°50'55 min. Earth dist. -5336 Feb 15 j 02:40 15°522'22 17.41557 AU max. Earth dist. -5329 Sep 22 j 21:01 20° **Ω**00'09 19.84571 AU direct -5336 May 01 j 21:54 13°518'21 retrograde -5328 Jan 08 j 01:49 24°**Ω**14'00 -5328 Mar 24 j 02:57 22° Ω 13'22 0°55'47 opposition -5336 Aug 21 j 05:27 17°547'01 0°49'48 min. Earth dist. -5328 Mar 23 j 18:28 22°**Ω**14'15 17.88139 AU conjunction -5336 Aug 21 j 05:27 17°547'01 0°50'06 direct -5328 Jun 09 j 05:43 20° **Ω**11'10 minimum elong max. Earth dist. -5336 Aug 20 j 18:35 17°545'17 19.43725 AU -5336 Dec 06 i 03:41 22°507'23 -5328 Sep 26 j 05:25 $24^{\circ}\Omega 27'43$ $0^{\circ}49'32$ retrograde conjunction -5335 Feb 18 j 19:03 20°506'05 0°56'12 -5328 Sep 26 j 05:25 $24^{\circ}\Omega 27'43$ $0^{\circ}49'44$ opposition minimum elong -5328 Sep 26 j 15:31 $24^{\circ}\Omega$ 29'16 19.91751 AU min. Earth dist. -5335 Feb 19 i 04:49 20°505'03 17.46035 AU max. Earth dist. -5327 Jan 11 j 20:23 28°**Ω**41'44 direct -5335 May 07 j 01:25 18°901'12 retrograde opposition -5327 Mar 29 j 01:22 $26^{\circ}\Omega41'17$ $0^{\circ}54'18$ -5335 Aug 26 i 02:40 22°\$28'34 0°50'56 min. Earth dist. -5327 Mar 28 j 14:37 $26^{\circ}\Omega 42'23$ 17.95399 AU conjunction -5335 Aug 26 j 02:40 22°\$28'34 0°51'14 direct -5327 Jun 14 j 03:17 $24^{\circ}\Omega$ 39'34 minimum elong max. Earth dist. -5335 Aug 25 j 17:17 22°527'05 19.48402 AU retrograde -5335 Dec 11 j 02:13 26°5048'14 conjunction -5327 Sep 30 j 19:26 28° **Ω**54'27 0°48'05 opposition -5334 Feb 23 j 21:46 24°5046'59 0°57'16 minimum elong -5327 Sep 30 j 19:27 $28^{\circ}\Omega$ 54'27 $0^{\circ}48'17$ min. Earth dist. -5334 Feb 24 j 04:17 24°5546'18 17.50895 AU max. Earth dist. -5327 Oct 01 j 06:53 28° Ω56'13 19.99081 AU direct -5334 May 12 j 05:38 22°542'24 -5327 Oct 18 j 17:38 0° m -5326 Jan 16 j 13:48 3°m/07'40 retrograde -5334 Aug 30 j 23:03 27°508'23 0°51'44 -5326 Apr 02 j 23:15 1°**™**07'21 conjunction opposition 0°52'31 -5334 Aug 30 j 23:03 27°508'23 0°52'01 min. Earth dist. -5326 Apr 02 j 10:30 1° Mp 08'40 18.02784 AU minimum elong -5334 Aug 30 j 17:09 27°507'27 19.53452 AU -5326 May 01 j 22:59 30°R€ max. Earth dist. -5334 Oct 19 j 08:40 0 $^{\circ}\Omega$ direct -5326 Jun 18 j 23:00 29° **Ω**06'08 retrograde -5334 Dec 15 j 22:38 1°**Ω**27'18 -5326 Aug 04 j 00:35 0°m -5333 Feb 15 j 09:24 30° Rூ opposition -5333 Mar 01 j 00:12 29°\$26'06 0°57'56 conjunction -5326 Oct 05 j 08:45 3° Mp 19'22 0°46'22 min. Earth dist. -5333 Mar 01 j 05:11 29°525'35 17.56136 AU minimum elong -5326 Oct 05 j 08:46 3°m/19'22 0°46'31 -5333 May 17 j 07:53 27°521'50 max. Earth dist. -5326 Oct 05 j 23:17 3° TO 21'35 20.06486 AU direct

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Earth dist. retrograde -5324 Jan 25 j 22:46 11° m 53'55 retrograde -5316 Feb 29 j 03:58 15°**£**40'59 opposition -5324 Apr 11 j 16:47 9°**№**53'52 0°48'04 min. Earth dist. -5316 May 16 j 00:22 13°**2**44'04 18.70736 AU min. Earth dist. -5324 Apr 11 j 00:20 9° m 55'33 18.17563 AU opposition -5316 May 17 j 04:02 13°**♀**41'17 0°21'42 -5324 Jun 27 j 13:42 -5316 Aug 01 j 09:43 11°**△**43'37 direct 7° m 53'34 direct conjunction -5324 Oct 13 j 09:12 12° Mp 03'29 0°42'09 conjunction -5316 Nov 15 j 06:39 15°**Ω**41'51 0°17'55 minimum elong -5324 Oct 13 j 09:12 12° m 03'29 0°42'16 minimum elong -5316 Nov 15 j 06:39 15°**≏**41'51 0°17'51 max. Earth dist. -5324 Oct 14 j 03:24 12° m 06'15 20.21199 AU max. Earth dist. -5316 Nov 16 j 12:13 15°**Ω**46'11 20.73658 AU retrograde -5323 Jan 29 j 14:54 16° Mp 14'10 retrograde -5315 Mar 04 j 15:07 19°**2**46'31 opposition -5323 Apr 16 j 12:14 14° Mp 14'13 min. Earth dist. -5315 May 20 j 10:55 17°**2**49'53 18.76570 AU min. Earth dist. -5323 Apr 15 j 17:32 14° Mp 16'07 18.24810 AU opposition -5315 May 21 j 16:34 17°**£**46'55 direct -5323 Jul 02 j 09:07 12° m 14'19 direct -5315 Aug 05 j 21:01 15°**£**49'34 conjunction -5323 Oct 17 j 20:15 16° m 22'37 0°39'41 conjunction -5315 Nov 19 j 12:47 19°**£**46'41 0°14'22 minimum elong -5323 Oct 17 j 20:15 16° m 22'37 0°39'47 minimum elong -5315 Nov 19 i 12:47 19°**£**46'41 0°14'18 max. Earth dist. -5323 Oct 18 j 15:22 16° m 25'30 20.28363 AU behind sun begin -5315 Nov 19 i 09:34 19° **2**46'13 retrograde -5322 Feb 03 i 04:14 20° m 32'28 behind sun end -5315 Nov 19 i 15:59 19°**2**47'08 -5322 Apr 20 j 11:20 18° mp 34'33 18.31899 AU max. Earth dist. -5315 Nov 20 i 19:08 19° **2**51'07 20.79353 AU min. Earth dist. opposition -5322 Apr 21 j 06:53 18° m 32'34 -5314 Mar 09 j 00:09 23° **2**50'50 0°42'34 retrograde -5322 Jul 07 j 00:54 16° mp 33'02 -5314 May 24 j 23:16 21° **2**54'16 18.82131 AU direct min. Earth dist. -5314 May 26 j 04:36 21°**♀**51'19 opposition 0°13'50 -5322 Oct 22 j 06:41 20° m 39'43 0°37'02 -5314 Aug 10 j 04:49 19°**2**54'18 conjunction direct -5322 Oct 22 j 06:41 20° m 39'43 0°37'06 minimum elong -5322 Oct 23 j 03:58 20° m 42'56 20.35363 AU -5314 Nov 23 j 18:47 23°**♀**50'23 0°10'47 max. Earth dist. conjunction -5321 Feb 07 j 18:31 24° Mp 48'43 -5314 Nov 23 j 18:47 23°**♀**50'23 minimum elong 0°10'40 retrograde -5321 Apr 25 j 02:46 22° m 51'06 18.38796 AU -5314 Nov 23 j 13:41 23°**△**49'40 min. Earth dist. behind sun begin -5321 Apr 26 j 00:38 22° m 48'53 0°39'29 -5314 Nov 23 j 23:53 23°**£**51'07 opposition behind sun end -5321 Jul 11 j 18:22 20° m/49'41 -5314 Nov 25 j 02:06 23°**♀**54'57 20.84763 AU direct max. Earth dist. -5313 Mar 13 j 10:58 27°**£**54'03 retrograde -5321 Oct 26 j 16:10 24° m 54'47 0°34'11 conjunction min. Earth dist. -5313 May 29 j 08:58 25°**♀**57'44 18.87366 AU minimum elong -5321 Oct 26 j 16:11 24° m 54'47 0°34'13 opposition -5313 May 30 j 15:49 25°**♀**54'39 0°09'49 max. Earth dist. -5321 Oct 27 j 14:29 24° m 58'07 20.42164 AU direct -5313 Aug 14 j 14:37 23°**♀**57'56 retrograde -5320 Feb 12 j 06:35 29° Mp 02'58 -5320 Apr 29 j 17:36 27° m 03'08 0°36'13 -5313 Nov 28 j 00:28 27°**♀**53'05 0°07'09 opposition conjunction min. Earth dist. -5320 Apr 28 j 19:08 27° m 05'24 18.45515 AU -5313 Nov 28 j 00:28 27°**♀**53'05 0°07'02 minimum elong -5320 Jul 15 j 08:13 25° m 04'14 behind sun begin -5313 Nov 27 j 18:23 27°**♀**52'13 direct behind sun end -5313 Nov 28 j 06:33 27°**♀**53'56 -5320 Oct 30 j 01:08 29° m 07'48 0°31'10 -5313 Nov 29 j 08:09 27°**2**57'41 20.89800 AU conjunction max. Earth dist. -5320 Oct 30 j 01:08 29° m 07'48 0°31'12 minimum elong -5312 Jan 05 i 07:06 0°M -5320 Oct 31 j 01:25 29° m 11'26 20.48794 AU max. Earth dist. retrograde -5312 Mar 16 j 19:27 1°M56'19 -5320 Nov 13 j 16:56 0∘ಹ -5312 Jun 01 i 20:41 30°R Ω retrograde -5319 Feb 15 i 19:16 3°**£**15′10 min. Earth dist. -5312 Jun 01 i 20:35 0°ML00'01 18.92204 AU min. Earth dist. -5319 May 03 j 08:30 1°**2**17'51 18.52056 AU opposition -5312 Jun 03 j 02:34 29°**£**57'01 0°05'46 -5319 May 04 j 09:17 1°**£**15'22 0°32'47 direct -5312 Aug 17 j 21:16 28° **2**00'34 opposition -5319 Jun 07 j 02:04 30°R M -5312 Oct 27 j 19:19 0°M direct -5319 Jul 19 j 23:16 29° m 16'45 -5319 Aug 30 j 03:56 0∘ଫ conjunction -5312 Dec 01 j 06:08 1°M54'52 0°03'30 minimum elong -5312 Dec 01 j 06:08 1°M54'52 0°03'20 conjunction -5319 Nov 03 j 09:18 3°**2**18'52 0°28'01 behind sun begin -5312 Nov 30 j 23:36 1°M53'57 -5319 Nov 03 j 09:18 3°**♀**18'52 0°28'01 -5312 Dec 01 j 12:39 1°M55'47 minimum elong behind sun end -5319 Nov 04 j 10:40 3°**£**22'38 20.55248 AU -5312 Dec 02 j 14:08 1°M59'30 20.94417 AU max. Earth dist. max. Earth dist. -5318 Feb 20 j 06:11 retrograde 7°**£**25′29 retrograde -5311 Mar 21 j 05:37 5°**™**57'42 min. Earth dist. -5318 May 07 j 23:13 5°**£**28'14 18.58446 AU min. Earth dist. -5311 Jun 06 j 05:26 4°M01'34 18.96582 AU opposition -5318 May 09 j 00:27 5°**£**25'41 0°29'12 opposition -5311 Jun 07 j 12:24 3°M58'29 0°01'42 direct -5318 Jul 24 j 11:04 3°**₽**27'23 direct -5311 Aug 22 j 05:46 2°M02'15 desc. node -5311 Nov 09 j 18:28 4°M28'41 conjunction -5318 Nov 07 j 16:51 7°**£**28'07 0°24'45 minimum elong -5318 Nov 07 j 16:51 7°**£**28'07 0°24'44 -5311 Dec 05 j 11:34 5°**™**55'49 0°00'-15 conjunction max. Earth dist. -5318 Nov 08 j 20:04 -5311 Dec 05 j 11:34 5°**™**55'49 0°00'25 7°**೨**32'08 20.61561 AU minimum elong

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5311 in astronomical counting style is the year 5312 BCE in historical counting style. -5311 Dec 05 i 05:01 5°M54'54 direct -5304 Sep 18 j 22:12 29°M 51'05 behind sun begin -5311 Dec 05 j 18:06 -5304 Oct 07 j 13:15 behind sun end 5°M,56'44 0°×7 6°M00'25 20.98535 AU -5311 Dec 06 j 19:26 max. Earth dist. -5303 Jan 01 j 23:23 -5310 Mar 25 j 13:47 9°M58'18 3°**₹**41'34 0°-24'-35 retrograde conjunction 0°-2'-21 -5310 Jun 11 j 22:01 -5303 Jan 01 j 23:23 3°**х** 41'34 0°24'52 opposition 7°**I**ቤ59'07 minimum elong -5303 Jan 03 j 04:24 3°**х** 45'41 21.12865 AU min. Earth dist. -5310 Jun 10 j 16:18 8°ML02'05 19.00447 AU max. Earth dist. -5303 Apr 22 j 21:47 direct -5310 Aug 26 j 11:51 6°M03'05 retrograde 7°**х** 42′41 -5303 Jul 08 j 22:27 min. Earth dist. 5°**х** 45′50 19.13099 AU conjunction -5310 Dec 09 j 16:50 9°M55'56 0°-3'-58 opposition -5303 Jul 10 j 01:19 5°**х** 43′08 0°-28'-57 minimum elong -5310 Dec 09 j 16:51 9° M $_{55'56}$ 0°04'09 direct -5303 Sep 23 j 03:36 3°**∡**¹47'14 behind sun begin -5310 Dec 09 j 10:22 9°M55'02 -5310 Dec 09 j 23:19 -5302 Jan 06 j 04:42 7°**∡**37'40 0°-27'-42 behind sun end 9°M56'51 conjunction -5302 Jan 06 j 04:42 max. Earth dist. -5310 Dec 11 j 00:37 10°ML00'31 21.02134 AU minimum elong 7°**х** 37'40 0°27'59 -5302 Jan 07 j 09:02 retrograde -5309 Mar 29 j 23:20 13°ML58'07 max. Earth dist. 7°**∡**41'42 21.13141 AU min. Earth dist. -5309 Jun 15 j 00:32 12°ML01'58 19.03762 AU retrograde -5302 Apr 27 j 03:37 11°**∡**38'51 opposition -5309 Jun 16 j 06:56 11°**M**.58'56 0°-6'-22 min. Earth dist. -5302 Jul 13 j 06:03 9°**∡**41'47 19.13183 AU direct -5309 Aug 30 j 19:15 10°ML03'01 opposition -5302 Jul 14 j 07:11 9°**∡**³39'15 0°-32'-18 direct -5302 Sep 27 j 06:22 7°**х¹**43'19 conjunction -5309 Dec 13 j 22:06 13°ML55'16 0°-7'-34 minimum elong -5309 Dec 13 j 22:06 13°ML55'16 conjunction -5301 Jan 10 j 10:18 11°**∡** 33'49 0°-30'-40 behind sun begin -5309 Dec 13 j 16:10 13°M 54'26 minimum elong -5301 Jan 10 j 10:18 11°**尽** 33'49 behind sun end -5309 Dec 14 i 04:03 13°M 56'05 max. Earth dist. -5301 Jan 11 j 13:46 11° ₹37'43 21.13038 AU max. Earth dist. -5309 Dec 15 i 05:25 13°ML59'45 21.05161 AU retrograde -5301 May 01 i 12:33 15° ₹ 35'06 -5308 Jan 01 i 22:09 15°M min. Earth dist. -5301 Jul 17 j 11:45 13° ₹38'01 19.12867 AU retrograde -5308 Apr 02 j 06:43 17° ML 57'08 -5301 Jul 18 i 12:45 13° ₹35'29 0°-35'-31 opposition -5308 Jun 18 j 10:25 16° ML00'49 19.06515 AU -5301 Oct 01 j 11:46 11° ₹39'30 min. Earth dist. direct -5308 Jun 19 j 15:15 15°M 57'56 0°-10'-21 opposition -5308 Jul 14 j 21:55 15°RML -5300 Jan 14 j 16:19 15° ₹ 30'12 0°-33'-30 conjunction -5308 Sep 03 j 01:02 14°ML02'06 -5300 Jan 14 j 16:19 15° ₹30'12 0°33'48 direct minimum elong -5308 Oct 21 j 06:17 15°ML -5300 Jan 15 j 18:44 15° ₹33'57 21.12502 AU max. Earth dist. -5300 May 04 j 19:05 19°**尽** 31'39 retrograde -5308 Dec 17 j 03:17 17°ML53'48 0°-11'-8 -5300 Jul 21 j 18:09 17°**х** 32'02 0°-38'-34 conjunction opposition -5308 Dec 17 j 03:16 17° ML 53'48 0°11'21 -5300 Jul 20 j 19:17 17° ₹34'21 19.12113 AU minimum elong min. Earth dist. -5300 Oct 04 j 14:22 15° ₹36'00 -5308 Dec 16 j 22:26 17° ML53'07 behind sun begin direct -5308 Dec 17 j 08:06 17°M 54'28 behind sun end -5308 Dec 18 j 10:11 17° ML 58'13 21.07649 AU -5299 Jan 17 j 22:45 19° ₹ 26'59 0°-36'-11 max. Earth dist. conjunction -5307 Apr 06 j 15:49 21°M 55'25 -5299 Jan 17 j 22:44 19°**х** 26'59 0°36'30 retrograde minimum elong opposition -5307 Jun 23 j 22:58 19°M 56'09 0°-14'-16 max. Earth dist. -5299 Jan 18 j 23:48 19° ₹30'32 21.11532 AU min. Earth dist. -5307 Jun 22 j 17:39 19°ML59'05 19.08734 AU retrograde -5299 May 09 j 04:11 23°**尽**28'40 direct -5307 Sep 07 j 07:17 18°ML00'20 opposition -5299 Jul 25 j 23:30 21°**х** 29'03 0°-41'-26 min. Earth dist. -5299 Jul 25 j 01:10 21° ₹ 31'18 19.10900 AU -5307 Dec 21 j 08:07 21°ML51'34 0°-14'-38 -5299 Oct 08 j 19:16 19° ₹32'56 conjunction direct -5307 Dec 21 j 08:07 21°M 51'34 minimum elong -5307 Dec 21 j 05:30 21°ML51'12 -5298 Jan 22 j 05:28 23°**х** 24'18 0°-38'-42 behind sun begin conjunction -5307 Dec 21 j 10:43 21°M51'56 -5298 Jan 22 j 05:28 23°**х** 24'18 0°39'01 behind sun end minimum elong -5307 Dec 22 j 14:38 21° M 55'56 21.09609 AU -5298 Jan 23 j 05:08 23° ₹27'40 21.10063 AU max. Earth dist. max. Earth dist. retrograde -5306 Apr 10 j 21:58 25°M 52'59 retrograde -5298 May 13 j 11:36 27° ₹26'18 -5298 Jul 29 j 09:03 25° ₹28'41 19.09173 AU min. Earth dist. -5306 Jun 27 i 02:30 23°M 56'25 19.10460 AU min. Earth dist. opposition -5306 Jun 28 j 06:20 23°M 53'38 0°-18'-6 opposition -5298 Jul 30 j 04:59 25°**尽** 26'39 0°-44'-8 direct -5306 Sep 11 j 12:38 21° ML57'49 direct -5298 Oct 12 j 22:36 23° ₹30'26 -5306 Dec 25 j 13:09 25°ML48'42 0°-18'-3 -5297 Jan 26 j 12:57 27° ₹22'18 0°-41'-3 conjunction conjunction -5306 Dec 25 j 13:09 25°ML48'42 0°18'18 -5297 Jan 26 j 12:57 27° ₹22'18 0°41'22 minimum elong minimum elong -5297 Jan 27 j 10:42 27° ₹25'23 21.08077 AU max. Earth dist. -5306 Dec 26 j 19:18 25°ML52'59 21.11116 AU max. Earth dist. retrograde -5305 Apr 15 j 07:10 29° ML49'57 -5297 Mar 17 j 22:17 0°정 min. Earth dist. -5305 Jul 01 j 08:45 27° ML 53'21 19.11750 AU retrograde -5297 May 17 j 20:57 1°る24'37 -5305 Jul 02 j 13:00 27°M 50'31 0°-21'-50 -5297 Jul 19 j 20:19 30°R 🗷 opposition -5305 Sep 15 j 18:11 25°M 54'40 -5297 Aug 03 j 10:16 29°**x** 24'57 0°-46'-36 direct opposition -5297 Aug 02 j 15:19 29°**尽** 26'52 19.06905 AU min. Earth dist. -5305 Dec 29 j 18:11 29°M45'18 0°-21'-22 -5297 Oct 17 j 03:18 27° ₹28'34 conjunction direct -5305 Dec 29 j 18:11 29°M 45'18 0°21'39 -5296 Jan 06 j 14:53 0°궁 minimum elong max. Earth dist. -5305 Dec 30 j 23:49 29°ML49'31 21.12188 AU -5304 Jan 03 j 01:27 0°**∡** conjunction -5296 Jan 30 j 20:59 1°る21'00 0°-43'-11 retrograde -5304 Apr 18 j 12:47 3°**х** 46′27 minimum elong -5296 Jan 30 j 20:59 1°る21'00 0°43'30 opposition -5304 Jul 05 j 19:25 1°**∡** 46'57 0°-25'-27 max. Earth dist. -5296 Jan 31 j 16:48 1°る23'49 21.05516 AU min. Earth dist. -5304 Jul 04 j 16:46 1°**х** 49'38 19.12621 AU -5296 May 21 j 04:54 5°**る**23'42 retrograde

-5296 Aug 06 j 15:49

opposition

3°る23'57 0°-48'-52

-5304 Aug 31 j 04:26 30°RM

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•	omena of Uranus fr		_	` //		, .	age 8
	nical year style is used: Tl	-					
min. Earth dist.	-5296 Aug 05 j 23:30		19.04055 AU	min. Earth dist.	-5288 Sep 07 j 15:12		18.65754 AU
direct	-5296 Oct 20 j 07:35	1° る 27'23		direct	-5288 Nov 21 j 07:25	3° ≈ 50′10	
. ,.	5205 E 1 02 : 05 25	50=20000	00 451 0		5207.14 00:22.05	7051100	00.521.10
conjunction	-5295 Feb 03 j 05:25	5°る20'28	0°-45'-8	conjunction	-5287 Mar 08 j 23:05	7°≈51'23	0°-52'-10
minimum elong	-5295 Feb 03 j 05:25	5° る 20'28	0°45'27	minimum elong	-5287 Mar 08 j 23:05	7°≈51'23	0°52'27
max. Earth dist.	-5295 Feb 03 j 22:58		21.02394 AU	max. Earth dist.	-5287 Mar 08 j 23:41		20.62774 AU
retrograde	-5295 May 25 j 14:21	9° る 23'34		retrograde	-5287 Jun 28 j 00:32		
opposition	-5295 Aug 10 j 21:17		0°-50'-54	opposition	-5287 Sep 12 j 00:34	9°≈58'27	
min. Earth dist.	-5295 Aug 10 j 06:05		19.00650 AU	min. Earth dist.	-5287 Sep 12 j 00:18		18.59756 AU
direct	-5295 Oct 24 j 12:56	5° る 26'53		direct	-5287 Nov 25 j 15:56	7°≈58'58	
. ,.	5204 F 1 07 : 14 26	00=20141	00 461 51		5206 M 12:12.51	12001125	00.511.54
conjunction minimum elong	-5294 Feb 07 j 14:26	9° ට 20'41 9° ට 20'41	0°-46'-51 0°47'10	conjunction minimum elong	-5286 Mar 13 j 13:51 -5286 Mar 13 j 13:51		0°-51'-54 0°52'09
_	-5294 Feb 07 j 14:26			· ·	3		
max. Earth dist.	-5294 Feb 08 j 06:04		20.98723 AU	max. Earth dist.	-5286 Mar 13 j 12:49		20.566/0 AU
retrograde	-5294 May 29 j 22:23	13°る24'14	00 521 41	. 1	-5286 May 09 j 14:37		
opposition	-5294 Aug 15 j 02:55	11°る24'15		retrograde	-5286 Jul 02 j 12:53		
min. Earth dist.	-5294 Aug 14 j 14:21		18.96728 AU	•,•	-5286 Aug 26 j 16:09	15°R≈	00 571 14
direct	-5294 Oct 28 j 17:34	9° る 27'08		opposition	-5286 Sep 16 j 08:49	14°≈09'23	0°-57'-14
	5202 F. L. 12 : 00 00	120 7 21144	00 401 21	min. Earth dist.	-5286 Sep 16 j 10:59		18.53547 AU
conjunction	-5293 Feb 12 j 00:00			direct	-5286 Nov 29 j 23:39		
minimum elong	-5293 Feb 12 j 00:00				-5285 Feb 24 j 18:42	15° ≈	
max. Earth dist.	-5293 Feb 12 j 13:19		20.94581 AU				
retrograde	-5293 Jun 03 j 08:37			conjunction	-5285 Mar 18 j 05:31		0°-51'-20
opposition	-5293 Aug 19 j 08:35			minimum elong	-5285 Mar 18 j 05:31		0°51'36
min. Earth dist.	-5293 Aug 18 j 21:14		18.92361 AU	max. Earth dist.	-5285 Mar 18 j 01:12		20.50365 AU
direct	-5293 Nov 01 j 23:52	13° ℃ 28'11		retrograde	-5285 Jul 07 j 03:46		
		_		opposition	-5285 Sep 20 j 17:42		0°-56'-29
conjunction	-5292 Feb 16 j 10:12		0°-49'-36	min. Earth dist.	-5285 Sep 20 j 21:41		18.47125 AU
minimum elong	-5292 Feb 16 j 10:12		0°49'56	direct	-5285 Dec 04 j 09:39	16° ≈ 22'04	
max. Earth dist.	-5292 Feb 16 j 21:42		20.90003 AU				
retrograde	-5292 Jun 06 j 16:36			conjunction	-5284 Mar 21 j 22:13		0°-50'-30
opposition	-5292 Aug 22 j 14:24		0°-55'-29	minimum elong	-5284 Mar 21 j 22:13		0°50'43
min. Earth dist.	-5292 Aug 22 j 05:35		18.87596 AU	max. Earth dist.	-5284 Mar 21 j 16:06	20° ≈ 26'47	20.43810 AU
direct	-5292 Nov 05 j 04:40	17° ට 30'10		retrograde	-5284 Jul 10 j 17:33	24° ≈ 38′00	
				opposition	-5284 Sep 24 j 03:16		0°-55'-24
conjunction	-5291 Feb 19 j 20:56	21° る 26'38	0°-50'-37	min. Earth dist.	-5284 Sep 24 j 09:44	22° ≈ 36′18	18.40448 AU
minimum elong	-5291 Feb 19 j 20:56	21° る 26'38	0°50'55	direct	-5284 Dec 07 j 19:01	20° ≈ 36′28	
max. Earth dist.	-5291 Feb 20 j 06:06	21° පි 27'56	20.85081 AU				
retrograde	-5291 Jun 11 j 03:49	25° ට 31'44		conjunction	-5283 Mar 26 j 15:42	24° ≈ 43′36	0°-49'-22
opposition	-5291 Aug 26 j 20:28	23° る 31'19	0°-56'-30	minimum elong	-5283 Mar 26 j 15:42	24° ≈ 43′36	0°49'35
min. Earth dist.	-5291 Aug 26 j 12:48	23° る 32'07	18.82518 AU	max. Earth dist.	-5283 Mar 26 j 05:59	24° ≈ 42'11	20.37023 AU
direct	-5291 Nov 09 j 11:41	21° ප 33'11		retrograde	-5283 Jul 15 j 09:32	28° ≈ 54'48	
				opposition	-5283 Sep 28 j 13:31	26° ≈ 53'41	0°-54'-1
conjunction	-5290 Feb 24 j 08:14	25° ට 30'43	0°-51'-24	min. Earth dist.	-5283 Sep 28 j 21:58	26° ≈ 52'47	18.33546 AU
minimum elong	-5290 Feb 24 j 08:14	25° ට 30'43	0°51'42	direct	-5283 Dec 12 j 06:45	24° ≈ 52'44	
max. Earth dist.	-5290 Feb 24 j 15:48	25° ට 31'48	20.79852 AU				
retrograde	-5290 Jun 15 j 12:41	29° ප 36'27		conjunction	-5282 Mar 31 j 10:10	29° ≈ 01'28	0°-47'-57
opposition	-5290 Aug 31 j 02:56	27° る 35'54	0°-57'-13	minimum elong	-5282 Mar 31 j 10:10	29° ≈ 01'28	0°48'08
min. Earth dist.	-5290 Aug 30 j 21:39	27° පි 36'27	18.77155 AU	max. Earth dist.	-5282 Mar 30 j 22:46	28° ≈ 59'48	20.29999 AU
direct	-5290 Nov 13 j 17:14	25° る 37'26			-5282 Apr 17 j 04:08	0°)	
				retrograde	-5282 Jul 20 j 00:36	3° ¥ 13′30	
conjunction	-5289 Feb 28 j 20:25	29° る 36'06	0°-51'-55	opposition	-5282 Oct 03 j 00:30	1° ¥ 12'15	0°-52'-18
minimum elong	-5289 Feb 28 j 20:25	29° る 36'06	0°52'12	min. Earth dist.	-5282 Oct 03 j 11:16	1°) 11′06	18.26414 AU
max. Earth dist.	-5289 Mar 01 j 01:25	29° る 36'49	20.74379 AU		-5282 Nov 02 j 06:17	30° R ≈	
	-5289 Mar 07 j 19:15	0° ≈		direct	-5282 Dec 16 j 18:13	29° ≈ 10'53	
retrograde	-5289 Jun 20 j 00:42	3° ≈ 42'30			-5281 Jan 29 j 15:11	0°) €	
opposition	-5289 Sep 04 j 09:35	1° ≈ 41'50	0°-57'-40				
min. Earth dist.	-5289 Sep 04 j 05:34	1° ≈ 42'16	18.71565 AU	conjunction	-5281 Apr 05 j 05:28	3° ¥ 21′12	0°-46'-15
	-5289 Oct 23 j 06:10	30°Ŗ₹		minimum elong	-5281 Apr 05 j 05:28	3° ¥ 21′12	0°46'25
direct	-5289 Nov 18 j 00:50	29° ප් 43'01		max. Earth dist.	-5281 Apr 04 j 14:22		20.22788 AU
	-5289 Dec 13 j 11:53	0° ≈		retrograde	-5281 Jul 24 j 17:15	7°) 34′04	
	Ÿ			opposition	-5281 Oct 07 j 12:03	5°) 32'41	0°-50'-17
conjunction	-5288 Mar 04 j 09:29	3° ≈ 42'57	0°-52'-11	min. Earth dist.	-5281 Oct 08 j 00:55		18.19134 AU
minimum elong	-5288 Mar 04 j 09:29	3° ≈ 42'57	0°52'27	direct	-5281 Dec 21 j 07:40	3° ¥ 30′51	
max. Earth dist.	-5288 Mar 04 j 12:50		20.68672 AU	max. Earth dist.	-5280 Apr 08 j 09:18		20.15449 AU
retrograde	-5288 Jun 23 j 11:20	7° ≈ 50'03			. ,		
opposition	-5288 Sep 07 j 16:52	5° ≈ 49'18	0°-57'-50	conjunction	-5280 Apr 09 j 01:43	7°) 42'48	0°-44'-16
	- •				- "		

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5280 in astronomical counting style is the year 5281 BCE in historical counting style. 7°**)** 42'48 0°44'26 opposition -5280 Apr 09 i 01:43 $-5272 \text{ Nov } 15 \text{ j } 07.45 \quad 16^{\circ} \Upsilon 02'08 \quad 0^{\circ} -19' -41$ minimum elong -5280 Jul 28 j 09:32 11° **€** 56'29 min. Earth dist. -5272 Nov 16 j 08:51 15°**Υ**'59'24 17.58443 AU retrograde -5280 Oct 11 j 00:25 9°**)** 54'57 0°-47'-57 -5271 Jan 29 j 22:49 13°**Υ**56'56 opposition direct -5280 Oct 11 j 15:09 9°**升**53'22 18.11760 AU min. Earth dist. -5280 Dec 24 j 21:19 -5271 May 21 j 23:41 18°**Υ**23'13 0°-15'-41 direct 7°**)** 52'40 conjunction -5271 May 21 j 23:41 18°**Υ**23'13 minimum elong 0°15'37 -5271 May 21 j 22:43 18°**Y**23'05 conjunction behind sun begin -5279 Apr 13 j 22:22 12° **米**06'13 -5271 May 22 j 00:40 18°**Y**23'22 minimum elong 0°42'09 behind sun end -5279 Apr 13 j 02:37 12°**米**03'18 20.08071 AU -5271 May 20 j 16:25 18°**Υ**18'25 19.55694 AU max. Earth dist. max. Earth dist. retrograde -5279 Aug 02 j 02:47 16°**米** 20'47 retrograde -5271 Sep 07 j 17:27 22°**Υ**44'05 opposition -5279 Oct 15 j 13:29 14° **★** 19'04 0°-45'-20 opposition -5271 Nov 20 j 03:48 20°**Υ**41'56 0°-15'-11 -5271 Nov 21 j 06:50 20°**Υ**38'59 17.53082 AU min. Earth dist. min. Earth dist. -5279 Dec 29 j 11:55 12° **★** 16'19 -5270 Feb 03 j 20:10 18°**Y**36'28 direct direct max. Earth dist. -5270 May 25 j 18:46 22°**Υ**59'11 19.50481 AU conjunction -5278 Apr 18 j 20:08 16° ★31'31 0°-39'-31 minimum elong -5278 Apr 18 j 20:08 16° ★ 31'31 0°39'38 conjunction -5270 May 27 j 02:51 23°**Y**04'08 0°-11'-35 max. Earth dist. -5278 Apr 17 j 23:32 16°**米**28'27 20.00730 AU minimum elong -5270 May 27 j 02:51 23°**Υ**04'08 0°11'30 retrograde -5278 Aug 06 j 20:41 20° **₭** 46'54 behind sun begin -5270 May 26 j 22:03 23°**Y**03'25 opposition -5278 Oct 20 j 03:10 18° **)** 45'03 0°-42'-25 behind sun end -5270 May 27 j 07:39 23°**Υ**'04'52 min. Earth dist. -5278 Oct 20 j 21:17 18° \(\frac{1}{4}\)3'05 17.97103 AU retrograde -5270 Sep 12 j 17:28 27°**Υ**25'37 direct -5277 Jan 03 j 03:54 16° **★**41'51 opposition -5270 Nov 25 j 00:31 25°**Υ**23'28 0°-10'-34 min. Earth dist. -5270 Nov 26 j 03:31 25°**Υ**20'31 17.48018 AU conjunction -5277 Apr 23 i 18:31 20° **)** 58'42 0°-36'-45 direct -5269 Feb 08 i 20:38 23°**Υ**17'45 minimum elong -5277 Apr 23 i 18:32 20° ¥ 58'42 0°36'50 max. Earth dist. -5269 May 30 j 21:33 27°**Υ**41'35 19.45566 AU max. Earth dist. -5277 Apr 22 j 18:51 20° **★**55'09 19.93504 AU retrograde -5277 Aug 11 j 14:27 25°**)** 14'54 -5269 Jun 01 j 06:31 27°**Υ**46'41 conjunction 0°-7'-24 -5277 Oct 24 j 17:49 23° ¥ 12'56 0°-39'-14 -5269 Jun 01 j 06:30 27°**Υ**'46'41 0°07'17 opposition minimum elong -5277 Oct 25 j 13:49 23° **∺** 10'46 17.89972 AU -5269 Jun 01 j 00:19 27°**Υ**45'45 min. Earth dist. behind sun begin -5276 Jan 07 j 19:44 21°**米**09'17 behind sun end -5269 Jun 01 j 12:42 27°**Y**47'37 direct -5269 Jul 08 j 15:28 0°8 -5276 Apr 27 j 17:40 25°**)** €27'48 0°-33'-45 -5269 Sep 17 j 16:23 2°808'43 conjunction retrograde -5276 Apr 27 j 17:40 25° **€** 27'48 0°33'49 opposition -5269 Nov 29 j 22:25 0°806'33 0°-5'-50 minimum elong 0°**と**03'25 17.43277 AU -5276 Apr 26 j 17:31 25°**米**24'10 19.86467 AU -5269 Dec 01 j 03:07 max. Earth dist. min. Earth dist. -5276 Aug 15 j 09:58 29°**)** 44'49 -5269 Dec 02 j 10:21 30°R℃ retrograde -5276 Oct 28 j 09:14 27° **)** 42'44 0°-35'-47 -5268 Feb 13 j 19:34 28°**Υ**00'36 opposition direct -5276 Oct 29 j 06:03 27° ¥40'29 17.83054 AU -5268 Apr 23 j 17:13 0°8 min. Earth dist. -5275 Jan 11 j 14:10 25° ¥ 38'44 max. Earth dist. -5268 Jun 04 j 00:29 2°**8**25'24 19.40999 AU direct conjunction -5275 May 02 j 17:25 29° **★**58'51 0°-30'-32 conjunction -5268 Jun 05 j 10:14 2°830'39 0°-3'-8 minimum elong -5275 May 02 j 17:25 29°**升**58'51 0°30'35 minimum elong -5268 Jun 05 j 10:13 2°830'39 0°03'01 max. Earth dist. -5275 May 01 j 14:41 29° **∺** 54'48 19.79684 AU behind sun begin -5268 Jun 05 j 03:30 2°**8**29'38 -5275 May 03 j 01:06 $0^{\circ}\Upsilon$ behind sun end -5268 Jun 05 j 16:57 2°**8**31'40 retrograde -5275 Aug 20 j 04:23 4°Υ16'41 -5268 Sep 21 j 17:11 6°**8**53'10 retrograde -5275 Nov 02 j 01:30 2°\bar{Y}14'32 0°-32'-5 -5268 Dec 03 j 20:54 4°**8**50'58 0°-1'-2 opposition opposition min. Earth dist. -5275 Nov 03 j 00:06 2°Υ12'05 17.76430 AU min. Earth dist. -5268 Dec 05 j 01:05 4°847'53 17.38894 AU 0°Υ10'10 -5267 Feb 17 j 21:46 2°844'46 direct -5274 Jan 16 i 07:42 direct -5267 Feb 22 i 09:16 asc. node 2°845'19 -5274 May 07 j 18:02 4°Υ31'54 0°-27'-6 conjunction max. Earth dist. -5267 Jun 09 i 04:47 7°**と**10'35 19.36808 AU minimum elong -5274 May 07 j 18:02 4°**Υ**31'54 0°27'06 max. Earth dist. -5274 May 06 i 14:56 4°**Υ**27'47 19.73211 AU conjunction -5267 Jun 10 i 14:24 7°**呂**15'50 0°01'17 minimum elong retrograde -5274 Aug 25 j 01:30 8°Y50'33 -5267 Jun 10 i 14:24 7°**呂**15'50 0°01'27 opposition -5274 Nov 06 i 18:40 6°Υ48'22 0°-28'-10 behind sun begin -5267 Jun 10 j 07:38 7°**8**14'48 min. Earth dist. -5274 Nov 07 j 17:42 6°**Υ**45'51 17.70107 AU behind sun end -5267 Jun 10 j 21:09 7°**と**16'52 -5273 Jan 21 j 04:31 4°**Υ**43'42 direct retrograde -5267 Sep 26 j 16:21 11°**8**38'44 opposition -5267 Dec 08 j 20:08 9°**8**36'30 0°03'46 9°**Υ**07'00 0°-23'-28 conjunction -5273 May 12 j 19:17 min. Earth dist. -5267 Dec 10 j 01:36 9°833'16 17.34921 AU -5273 May 12 j 19:17 minimum elong 9°**Υ**07'00 0°23'27 direct -5266 Feb 22 j 22:07 7°**8**30'04 -5273 May 11 j 14:03 9°**Υ**02'33 19.67048 AU max. Earth dist. -5266 Jun 14 j 08:12 11°**8**56'37 19.33068 AU max. Earth dist. -5273 Aug 29 j 21:09 13°**Υ**26'25 retrograde -5273 Nov 11 j 12:45 11°**Υ**24'15 0°-24'-1 -5266 Jun 15 j 18:34 12°**8**02'00 0°05'37 opposition conjunction -5273 Nov 12 j 13:42 11°**Υ**21'31 17.64117 AU -5266 Jun 15 j 18:35 12°**8**02'00 0°05'48 min. Earth dist. minimum elong -5266 Jun 15 j 12:08 12°**8**01'01 direct -5272 Jan 26 j 00:00 9°**Ƴ**19'17 behind sun begin behind sun end -5266 Jun 16 j 01:02 12°**8**03'00 conjunction -5272 May 16 j 21:15 13° **Y**44'08 0° -19'-39 -5266 Aug 06 j 07:37 15°**8** minimum elong $-5272 \text{ May } 16 \text{ j } 21:16 \quad 13^{\circ} \Upsilon 44'08$ 0°19'37 retrograde -5266 Oct 01 j 17:12 16°**8**25'14 -5272 May 15 j 15:33 13°**Υ**39'35 19.61219 AU -5266 Nov 29 j 11:45 15°R8 max. Earth dist. retrograde -5272 Sep 02 j 19:58 18°**Υ**04'18 opposition

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Earth dist. -5265 Jun 20 j 17:27 16°848'08 behind sun begin -5257 Apr 08 j 13:29 20°**I**I42'12 direct -5265 Jun 21 j 04:13 16°**8**49'48 behind sun end -5265 Jun 19 j 13:41 16°**8**43'45 19.29816 AU -5257 Jul 29 j 23:43 25°**Ⅲ**15'25 0°39'28 max. Earth dist. conjunction -5257 Jul 29 j 23:43 25° **1**15'25 0°39'45 retrograde -5265 Oct 06 j 16:40 21°812'26 minimum elong -5257 Jul 29 j 01:57 25°**Ц**11'57 19.27067 AU opposition -5265 Dec 18 j 20:41 19°8 10'06 0°13'19 max. Earth dist. -5265 Dec 20 j 01:48 19°806'54 17.28446 AU -5257 Nov 13 j 23:39 29°**Д**38'26 min. Earth dist. retrograde -5264 Mar 04 j 04:17 17°**8**03'18 -5256 Jan 26 j 17:59 27°**Д**36'42 0°45'34 direct opposition max. Earth dist. -5264 Jun 23 j 17:22 21°**8**31'15 19.27139 AU min. Earth dist. -5256 Jan 27 j 12:38 27°**Д**34'41 17.28258 AU direct -5256 Apr 12 j 19:39 25°**Ⅲ**30'31 conjunction max. Earth dist. -5256 Aug 02 j 04:50 29°**Д**59'55 19.29512 AU minimum elong -5264 Jun 25 j 02:51 21°**8**36'31 0°14'20 -5256 Aug 02 j 05:22 0ಂತ behind sun begin -5264 Jun 24 j 23:49 21°**8**36'03 behind sun end -5264 Jun 25 j 05:52 21°**8**36'59 conjunction -5256 Aug 03 j 00:57 0°9503'07 0°42'10 retrograde -5264 Oct 10 j 17:21 26°800'10 minimum elong -5256 Aug 03 j 00:56 0°9503'07 0°42'28 opposition -5264 Dec 22 j 21:44 23°\(257'47\) 0°18'00 retrograde -5256 Nov 17 j 23:11 4°925'45 min. Earth dist. -5264 Dec 24 i 01:37 23°854'44 17.26081 AU opposition -5255 Jan 30 j 21:49 2°9524'08 0°48'24 direct -5263 Mar 09 j 09:17 21°850'51 min. Earth dist. -5255 Jan 31 i 15:37 2°522'14 17.30959 AU max. Earth dist. -5263 Jun 28 j 23:26 26° 819'33 19.25086 AU direct -5255 Apr 17 j 22:40 0°9518'12 max. Earth dist. -5255 Aug 07 j 07:23 4°5947'09 19.32451 AU conjunction -5255 Aug 08 j 01:30 4°950'02 0°44'34 minimum elong conjunction -5263 Sep 04 j 02:10 $\Pi^{\circ}0$ -5255 Aug 08 j 01:30 4°950'02 minimum elong 0°44'51 -5263 Oct 15 j 17:11 0°**Ⅱ**48'15 -5255 Nov 23 j 01:17 retrograde retrograde 9°9312'11 -5254 Feb 05 j 01:37 -5263 Nov 27 j 13:48 30°R8 0°50'54 opposition 7°9510'41 -5263 Dec 27 j 23:29 28°845'52 0°22'33 -5254 Feb 05 j 16:43 7°509'04 17.34109 AU opposition min. Earth dist. -5254 Apr 23 j 05:14 -5263 Dec 29 j 03:04 28°842'51 17.24355 AU min. Earth dist. direct 5°905'00 -5254 Aug 12 j 09:31 -5262 Mar 14 j 13:04 26°**8**38'52 max. Earth dist. 9°533'24 19.35818 AU direct -5262 Jun 16 j 01:25 $0^{\circ}\Pi$ -5262 Jul 04 j 03:10 1°**耳**07'51 19.23705 AU -5254 Aug 13 j 01:22 9°**©**35'55 max. Earth dist. conjunction 0°46'39 9°**9**35'55 -5254 Aug 13 j 01:22 minimum elong 0°46'57 -5262 Jul 05 j 10:26 1°**Ⅱ**12'48 0°22'14 -5254 Nov 27 j 23:22 13°957'32 conjunction retrograde minimum elong -5262 Jul 05 j 10:26 1°**Ⅱ**12'48 0°22'29 opposition -5253 Feb 10 j 05:27 11°556'07 0°53'02 retrograde -5262 Oct 20 j 17:58 5°**Ⅱ**36'35 min. Earth dist. -5253 Feb 10 j 19:36 11°554'37 17.37695 AU opposition -5261 Jan 02 j 01:35 3°**II**34'13 0°26'57 direct -5253 Apr 28 j 08:29 9°550'41 min. Earth dist. -5261 Jan 03 j 03:45 3°**Д**31'23 17.23329 AU max. Earth dist. -5253 Aug 17 j 10:19 14°5518'18 19.39626 AU -5261 Mar 19 j 18:32 1°**Ⅲ**27'13 direct max. Earth dist. -5261 Jul 09 j 09:21 5°**I**I56'46 19.23033 AU -5253 Aug 18 j 00:23 14°520'32 0°48'24 conjunction -5253 Aug 18 j 00:23 14°520'32 minimum elong -5261 Jul 10 j 13:59 6°**I**101'19 0°26'05 -5253 Dec 02 j 23:56 18°541'33 conjunction retrograde -5261 Jul 10 j 13:59 6°**Ⅱ**01'19 -5252 Feb 15 i 08:53 16°9540'11 0°54'47 minimum elong 0°26'21 opposition -5261 Oct 25 j 18:31 10°**Д**25'04 -5252 Feb 15 j 19:55 16° \$39'01 17.41704 AU retrograde min. Earth dist. 8°**II**22'48 0°31'09 opposition -5260 Jan 07 i 04:18 direct -5252 May 02 j 15:10 14°535'02 min. Earth dist. -5260 Jan 08 i 05:17 8°**Д**20'05 17.23006 AU direct -5260 Mar 23 j 23:24 6°**Ⅱ**15'52 -5252 Aug 21 j 22:29 19°503'40 0°49'48 conjunction -5252 Aug 21 i 22:29 19°503'40 0°50'06 minimum elong -5260 Jul 14 j 16:54 10°**II**49'57 0°29'46 max. Earth dist. -5252 Aug 21 j 11:25 19°501'55 19.43844 AU conjunction -5260 Jul 14 j 16:53 10°**II**49'57 0°30'02 retrograde -5252 Dec 06 j 20:28 23°524'01 minimum elong -5251 Feb 19 j 12:05 21°522'42 0°56'10 -5260 Jul 13 j 12:55 10°**Д**45'30 19.23070 AU max. Earth dist. opposition retrograde -5260 Oct 29 j 19:16 15°**Ⅲ**13'38 min. Earth dist. -5251 Feb 19 j 21:59 21°521'39 17.46131 AU opposition -5259 Jan 11 j 07:17 13°**Ⅲ**11'28 0°35'09 direct -5251 May 07 j 18:00 19°517'48 min. Earth dist. -5259 Jan 12 j 06:56 13°**Ц**08'54 17.23393 AU -5259 Mar 29 j 04:14 11°**Д**04'40 -5251 Aug 26 j 19:38 23°545'07 0°50'52 direct conjunction -5251 Aug 26 j 19:37 23°545'07 minimum elong 0°51'09 -5259 Jul 19 j 19:42 15°**Ⅲ**38'37 0°33'14 -5251 Aug 26 j 10:16 23°543'38 19.48490 AU conjunction max. Earth dist. -5259 Jul 19 j 19:42 15°**Ⅲ**38'37 0°33'32 -5251 Dec 11 j 19:22 28°504'44 minimum elong retrograde max. Earth dist. -5259 Jul 18 j 18:23 15°**Ⅲ**34'36 19.23794 AU opposition -5250 Feb 24 j 14:36 26°503'27 0°57'09 retrograde -5259 Nov 03 j 20:42 20°**Ⅱ**02'09 min. Earth dist. -5250 Feb 24 j 21:09 26°502'46 17.50984 AU opposition -5258 Jan 16 j 10:28 18°**Д**00'08 0°38'55 direct -5250 May 12 j 23:01 23°958'50 min. Earth dist. -5258 Jan 17 j 08:28 17°**I**57'45 17.24425 AU -5258 Apr 03 j 09:42 15°**Ц**53'31 -5250 Aug 31 j 15:56 28°524'45 direct conjunction 0°51'36 -5250 Aug 31 j 15:56 28°524'45 minimum elong

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-	nical year style is used: The		•	. ,,			age 11
max. Earth dist.	-5250 Aug 31 j 10:08	-		direct	-5242 Jun 19 j 15:51		
	-5250 Sep 26 j 09:29	0°N			,		
retrograde	-5250 Dec 16 j 14:53	2° Ω 43'35		conjunction	-5242 Oct 06 j 01:21	4° m 33'59	0°45'49
opposition	-5249 Mar 01 j 16:58	0°Ω42'21	0°57'45	minimum elong	-5242 Oct 06 j 01:21	4° m 33'59	
min. Earth dist.	-5249 Mar 01 j 21:55		17.56277 AU	max. Earth dist.	-5242 Oct 06 j 15:37	-	20.07012 AU
mm. Latin dist.	-5249 Mar 18 j 19:51		17.30277 AC	retrograde	-5241 Jan 21 j 22:33	8° Mp 46'12	20.07012 AC
direct	-5249 May 18 j 00:50	28°938'03		opposition	-5241 Apr 08 j 12:34	6° Mp 46'02	0040140
direct		28 3 38 03		• •		-	18.10673 AU
	-5249 Jul 14 j 01:42	0 86		min. Earth dist.	-5241 Apr 07 j 21:48	4° Mp 45'16	18.100/3 AU
:	5240 C 05 : 11.00	20 002120	0051150	direct	-5241 Jun 24 j 12:04	4 11/43 10	
conjunction	-5249 Sep 05 j 11:00	3°Ω02'28 3°Ω02'28			5241 O-4 10 : 12.45	00 m , 5 (142	0042140
minimum elong	-5249 Sep 05 j 11:00			conjunction	-5241 Oct 10 j 13:45	8° Mp 56'43	0°43'48
max. Earth dist.	-5249 Sep 05 j 07:02		19.59085 AU	minimum elong	-5241 Oct 10 j 13:45	8° Mp 56'43	
retrograde	-5249 Dec 21 j 12:29	7° Ω 20'31	0057150	max. Earth dist.	-5241 Oct 11 j 04:59		20.14310 AU
opposition	-5248 Mar 05 j 18:37	5° Ω 19'21		retrograde	-5240 Jan 26 j 15:07	13° Mp 08'07	00.4510.0
min. Earth dist.	-5248 Mar 05 j 20:01		17.62024 AU	opposition	-5240 Apr 12 j 08:53	11° Mp 08'02	
direct	-5248 May 22 j 02:43	3° Ω 15′23		min. Earth dist.	-5240 Apr 11 j 16:38		18.17936 AU
		 0 - 0 + 6		direct	-5240 Jun 28 j 06:07	9° m 07'41	
conjunction	-5248 Sep 09 j 05:27	7° Ω 38'16					
minimum elong	-5248 Sep 09 j 05:27	7° Ω 38'16		conjunction	-5240 Oct 14 j 01:39		
max. Earth dist.	-5248 Sep 09 j 05:18		19.65047 AU	minimum elong	-5240 Oct 14 j 01:39		
retrograde	-5248 Dec 25 j 07:33	11° Ω 55'29		max. Earth dist.	-5240 Oct 14 j 19:24		20.21512 AU
opposition	-5247 Mar 10 j 19:37	9° Ω 54'26		retrograde	-5239 Jan 30 j 06:07	-	
min. Earth dist.	-5247 Mar 10 j 19:07		17.68192 AU	min. Earth dist.	-5239 Apr 16 j 09:45	-	
direct	-5247 May 27 j 02:51	7° Ω 50'52		opposition	-5239 Apr 17 j 04:06	15° m 28'04	0°44'43
				direct	-5239 Jul 03 j 00:50	13° m 28'06	
conjunction	-5247 Sep 13 j 22:50	12° Ω 12'11	0°51'46				
minimum elong	-5247 Sep 13 j 22:50	12° Ω 12'11	0°52'01	conjunction	-5239 Oct 18 j 12:36	17° m 36'17	0°39'03
max. Earth dist.	-5247 Sep 14 j 00:16	12° Ω 12'24	19.71423 AU	minimum elong	-5239 Oct 18 j 12:36	17° m 36'17	0°39'08
	-5247 Nov 01 j 15:03	15° Ω		max. Earth dist.	-5239 Oct 19 j 07:14	17° m 39'06	20.28568 AU
retrograde	-5247 Dec 30 j 04:13	16° Ω 28'35		retrograde	-5238 Feb 03 j 20:27	21°Mp46'00	
	-5246 Mar 02 j 17:29	15°R Ω		opposition	-5238 Apr 21 j 22:44	19° m 46'04	0°41'50
opposition	-5246 Mar 15 j 20:04	14° Ω 27'39	0°57'21	min. Earth dist.	-5238 Apr 21 j 03:20	19° Mp 48'02	18.32054 AU
min. Earth dist.	-5246 Mar 15 j 16:20			direct	-5238 Jul 07 j 17:15		
direct	-5246 Jun 01 j 02:03				-		
	-5246 Aug 20 j 22:49			conjunction	-5238 Oct 22 j 22:45	21° m 53'03	0°36'22
	0 3			minimum elong	-5238 Oct 22 j 22:45		0°36'25
conjunction	-5246 Sep 18 j 15:23	16° Ω 44'13	0°51'11	max. Earth dist.	-5238 Oct 23 j 19:52	21° m 56'13	20.35486 AU
minimum elong	-5246 Sep 18 j 15:23			retrograde	-5237 Feb 08 j 10:24		
max. Earth dist.	-5246 Sep 18 j 20:37			opposition	-5237 Apr 26 j 16:22	24° m 02'01	0°38'44
retrograde	-5245 Jan 03 j 22:44	_		min. Earth dist.	-5237 Apr 25 j 18:41		
opposition	-5245 Mar 20 j 20:02		0°56'29	direct	-5237 Jul 12 j 10:13		
min. Earth dist.	-5245 Mar 20 j 14:11					'4' '-	
direct	-5245 Jun 06 j 01:06		17.01022110	conjunction	-5237 Oct 27 j 08:08	26° m 07'46	0°33'30
	0_100000			minimum elong	-5237 Oct 27 j 08:09	26° m) 07'46	0°33'33
conjunction	-5245 Sep 23 j 07:01	21°Ω14'26	0°50'17	max. Earth dist.	-5237 Oct 28 j 06:19		20.42259 AU
minimum elong	-5245 Sep 23 j 07:01	21°Ω14'26		man. Darun dige.	-5236 Jan 18 j 21:33	0∘ ⊽	20.12207110
max. Earth dist.	-5245 Sep 23 j 13:43			retrograde	-5236 Feb 12 j 22:21	ი∘ ഫ 15'50	
retrograde	-5244 Jan 08 j 18:22		17.00107110	. vii ograde	-5236 Mar 09 j 10:47		
opposition	-5244 Mar 24 j 19:12		0°55'18	min. Earth dist.	-5236 Apr 29 j 10:35		18.45620 AU
min. Earth dist.	-5244 Mar 24 j 10:40			opposition	-5236 Apr 30 j 09:03	28° m) 15'58	
direct	-5244 Jun 09 j 22:27		17.00743710	direct	-5236 Jul 16 j 00:15	26° m) 17'01	0 33 27
direct	-3244 Juli 09 j 22.27	21 0620 22		direct	-5236 Oct 24 j 23:28	ე∘ <u>ი</u>	
agniumation	5244 San 26 ; 21:57	250 0 42140	0°49'05		-3230 Oct 24 j 23.28	0 ==	
conjunction	-5244 Sep 26 j 21:57	25° Ω 42'48		conjunction	5236 Oat 20: 16:50	0.0.20122	0.30.30
minimum elong	-5244 Sep 26 j 21:57	25° Ω 42'48		conjunction	-5236 Oct 30 j 16:56	0° Ω 20'32	
max. Earth dist.	-5244 Sep 27 j 08:04		19.92362 AU	minimum elong max. Earth dist.	-5236 Oct 30 j 16:56	0° Ω 20'32	
retrograde	-5243 Jan 12 j 11:58	29° £ 56'42	0052146		-5236 Oct 31 j 17:22		20.48921 AU
opposition	-5243 Mar 29 j 17:42	27° Ω 56'15		retrograde	-5235 Feb 16 j 11:15	4° £ 27'49	10 50001 447
min. Earth dist.	-5243 Mar 29 j 07:07		17.96006 AU	min. Earth dist.	-5235 May 03 j 23:56		18.52221 AU
direct	-5243 Jun 14 j 20:03	25° Ω 54'34		opposition	-5235 May 05 j 00:46	2° Ω 27'58	0°32'01
	-5243 Sep 28 j 23:20	0° m)		direct	-5235 Jul 20 j 15:10	0° ჲ 29'22	
			004=45			. -	
conjunction	-5243 Oct 01 j 11:55	0° Mp 09'20	0°47'35	conjunction	-5235 Nov 04 j 00:53	4° £ 31'26	0°27'20
minimum elong	-5243 Oct 01 j 11:55	0° m, 09'20	0°47'44	minimum elong	-5235 Nov 04 j 00:53	4° Ω 31'26	
max. Earth dist.	-5243 Oct 01 j 23:12		19.99668 AU	max. Earth dist.	-5235 Nov 05 j 02:24		20.55458 AU
retrograde	-5242 Jan 17 j 06:05	4° m) 22'24		retrograde	-5234 Feb 20 j 21:32	8° 亞 38'00	
opposition	-5242 Apr 03 j 15:28	2° Mp 22'06		opposition	-5234 May 09 j 15:49	6° Ω 38'13	
min. Earth dist.	-5242 Apr 03 j 02:50	2° m, 23'23	18.03346 AU	min. Earth dist.	-5234 May 08 j 14:23	6° £ 40'47	18.58712 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 12

•	ical year style is used: Th		•	. //		, .	age 12
direct	-5234 Jul 25 j 02:45	-	in astronomicai cot	direct	-5227 Aug 22 j 21:36	3°M15'12	
direct	-3234 Jul 23 J 02.43	4 == 39 30			-5227 Aug 22 j 21.36 -5227 Sep 02 j 01:16		
	5224 N 00 : 00.20	00 0 40120	0024102	desc. node	-522/ Sep 02 J 01:16	3°M₁7′52	
conjunction	-5234 Nov 08 j 08:29 -5234 Nov 08 j 08:29	8° Ω 40'39	0°24'03		5227 D 0(: 02.05	7° M .08'39	00001.57
minimum elong	3	8° £ 40'39	0°24'02	conjunction	-5227 Dec 06 j 03:05		0°00'-57
max. Earth dist.	-5234 Nov 09 j 11:59		20.61885 AU	minimum elong	-5227 Dec 06 j 03:04	7°M08'39	0°01'07
retrograde	-5233 Feb 25 j 09:38	12° £ 46'31	10.65062 444	behind sun begin	-5227 Dec 05 j 20:30	7°M07'44	
min. Earth dist.	-5233 May 13 j 02:10		18.65062 AU	behind sun end	-5227 Dec 06 j 09:37	7°M09'34	20 00102 444
opposition	-5233 May 14 j 05:53	10° £ 46'49	0°24'44	max. Earth dist.	-5227 Dec 07 j 10:34		20.99102 AU
direct	-5233 Jul 29 j 15:25	8° ≏ 48'53		retrograde	-5226 Mar 26 j 04:41	11°ML11'00	10 000 70 177
	5000)	100 0 10110	0000111	min. Earth dist.	-5226 Jun 11 j 07:45		19.00972 AU
conjunction	-5233 Nov 12 j 15:26		0°20'41	opposition	-5226 Jun 12 j 13:19	9°M11'48	0°-3'-4
minimum elong	-5233 Nov 12 j 15:27		0°20'38	direct	-5226 Aug 27 j 03:45	7° M 15'45	
max. Earth dist.	-5233 Nov 13 j 19:48		20.68145 AU				
retrograde	3	16° £ 53'33		conjunction	-5226 Dec 10 j 08:24		0°-4'-37
opposition	-5232 May 17 j 19:20	14° £ 53'56		minimum elong	-5226 Dec 10 j 08:23		0°04'48
min. Earth dist.	-5232 May 16 j 15:30		18.71232 AU	behind sun begin	-5226 Dec 10 j 01:58		
direct	-5232 Aug 02 j 01:12	12° £ 56′20		behind sun end	-5226 Dec 10 j 14:48		
				max. Earth dist.	-5226 Dec 11 j 15:57		21.02620 AU
conjunction	,	16° £ 54'34	0°17'13		-5225 Mar 09 j 18:24		
minimum elong	-5232 Nov 15 j 22:08	16° ≙ 54'34	0°17'09	retrograde	-5225 Mar 30 j 14:24		
max. Earth dist.	-5232 Nov 17 j 03:57		20.74201 AU		-5225 Apr 20 j 15:18		
retrograde	-5231 Mar 05 j 06:28	20° ≏ 59'13		opposition	-5225 Jun 16 j 22:01		
min. Earth dist.	, ,	19° ≏ 02'41	18.77154 AU	min. Earth dist.	-5225 Jun 15 j 15:47		19.04213 AU
opposition	-5231 May 22 j 07:47	18° ≏ 59'43	0°17'01	direct	-5225 Aug 31 j 11:41		
direct	-5231 Aug 06 j 11:49	17° ≏ 02'27			-5225 Dec 12 j 10:08	15° M ₊	
conjunction	-5231 Nov 20 j 04:21	20° £ 59'34	0°13'40	conjunction	-5225 Dec 14 j 13:29	15°M07'22	0°-8'-12
minimum elong	-5231 Nov 20 j 04:20	20° £ 59'34	0°13'35	minimum elong	-5225 Dec 14 j 13:29	15°M07'22	0°08'24
behind sun begin	-5231 Nov 20 j 00:37	20° ჲ 59'02		behind sun begin	-5225 Dec 14 j 07:41	15°M06'33	
behind sun end	-5231 Nov 20 j 08:03	21° ≏ 00'05		behind sun end	-5225 Dec 14 j 19:17	15°ML08'11	
max. Earth dist.	-5231 Nov 21 j 10:42	21° ≏ 04'00	20.79977 AU	max. Earth dist.	-5225 Dec 15 j 20:33	15°M11'49	21.05588 AU
retrograde	-5230 Mar 09 j 15:31	25° ≏ 03'41		retrograde	-5224 Apr 02 j 21:03	19°M09'03	
opposition	-5230 May 26 j 19:52	23° ≏ 04'16	0°13'03	min. Earth dist.	-5224 Jun 19 j 01:35	17°M12'40	19.06925 AU
min. Earth dist.	-5230 May 25 j 14:31	23° ≏ 07'12	18.82782 AU	opposition	-5224 Jun 20 j 06:20	17° M 09'47	0°-11'-2
direct	-5230 Aug 10 j 20:18	21° ≏ 07'19		direct	-5224 Sep 03 j 16:35	15°M13'53	
conjunction	-5230 Nov 24 j 10:18	25° ≏ 03'23	0°10'05	conjunction	-5224 Dec 17 j 18:26		0°-11'-43
minimum elong	-5230 Nov 24 j 10:18		0°09'59	minimum elong	-5224 Dec 17 j 18:26	19°ML05'25	0°11'58
behind sun begin	-5230 Nov 24 j 04:58			behind sun begin	-5224 Dec 17 j 13:52		
behind sun end	-5230 Nov 24 j 15:38	25° ≏ 04'09		behind sun end	-5224 Dec 17 j 23:00	19°ML06'03	
max. Earth dist.	-5230 Nov 25 j 17:41	25° ≏ 07'58	20.85432 AU	max. Earth dist.	-5224 Dec 19 j 01:27	19°M09'52	21.08055 AU
retrograde	-5229 Mar 14 j 02:25	29° ≏ 07'00		retrograde	-5223 Apr 07 j 05:44	23°MJ06'51	
min. Earth dist.	-5229 May 30 j 00:21	27° ≏ 10'46	18.88040 AU	min. Earth dist.	-5223 Jun 23 j 08:32		19.09151 AU
opposition	-5229 May 31 j 07:08	27° ≏ 07'41	0°09'03	opposition	-5223 Jun 24 j 13:52		0°-14'-54
direct	-5229 Aug 15 j 05:43	25° ≏ 11'02		direct	-5223 Sep 07 j 23:41	19°ML11'39	
conjunction	-5229 Nov 28 j 16:06	29° Ω 06'08	0°06'28	conjunction	-5223 Dec 21 j 23:17		0°-15'-11
minimum elong	-5229 Nov 28 j 16:06	29° ≏ 06'09	0°06'19	minimum elong	-5223 Dec 21 j 23:17		0°15'25
behind sun begin	-5229 Nov 28 j 09:54	29° ≏ 05'16		behind sun begin	-5223 Dec 21 j 21:20		
behind sun end	-5229 Nov 28 j 22:18	29° ≏ 07'01		behind sun end	-5223 Dec 22 j 01:14		
max. Earth dist.	-5229 Nov 29 j 23:32	29° ≏ 10'42	20.90471 AU	max. Earth dist.	-5223 Dec 23 j 05:50		21.10049 AU
	-5229 Dec 14 j 05:40	0°M₊		retrograde	-5222 Apr 11 j 12:21		
retrograde	-5228 Mar 17 j 10:50	3°M09'18		opposition	-5222 Jun 28 j 21:09	25°M04'37	0°-18'-42
min. Earth dist.	-5228 Jun 02 j 11:56	1°M13'02	18.92864 AU	min. Earth dist.	-5222 Jun 27 j 17:16	25°M07'24	19.10936 AU
opposition	-5228 Jun 03 j 17:45	1°M10'03	0°05'00	direct	-5222 Sep 12 j 03:36	23°ML08'45	
	-5228 Jul 05 j 01:23	30° ₹ Ω					
direct	-5228 Aug 18 j 12:56	29° ჲ 13'38		conjunction	-5222 Dec 26 j 04:12	26°M59'31	0°-18'-34
	-5228 Sep 30 j 10:54	0° M		minimum elong	-5222 Dec 26 j 04:11		0°18'50
				max. Earth dist.	-5222 Dec 27 j 10:35		21.11631 AU
conjunction	-5228 Dec 01 j 21:45	3°M07'53	0°02'48		-5221 Feb 23 j 17:55	0° ∡ ¹	
minimum elong	-5228 Dec 01 j 21:47	3°M07'53	0°02'40	retrograde	-5221 Apr 15 j 20:41	1° ∡ ¹00'38	
behind sun begin	-5228 Dec 01 j 15:14	3°M06'58			-5221 Jun 07 j 14:09	30°RML	
behind sun end	-5228 Dec 02 j 04:19	3°M08'48		min. Earth dist.	-5221 Jul 01 j 23:27	29°MJ04'03	19.12310 AU
max. Earth dist.	-5228 Dec 03 j 05:35	3°M12′29	20.95053 AU	opposition	-5221 Jul 03 j 03:50	29°ML01'13	0°-22'-24
retrograde	-5227 Mar 21 j 21:14	7°M10'37		direct	-5221 Sep 16 j 09:31	27°ML05'22	
min. Earth dist.	-5227 Jun 06 j 20:55		18.97187 AU		-5221 Dec 13 j 21:01	0° ∡ ¹	
.,.	5227 I 00:02.42	50M 11105	0000157				

-5227 Jun 08 j 03:43 5°M11'25 0°00'57

opposition

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5220 in astronomical counting style is the year 5221 BCE in historical counting style. -5221 Dec 30 i 09:12 0°**₹**55'55 0°-21'-52 -5212 Jan 31 i 12:13 conjunction 2°**ට**33'26 0°-43'-24 conjunction minimum elong minimum elong -5221 Dec 30 i 09:12 0°**∡** 55'55 0°22'07 -5212 Jan 31 j 12:12 2°る33'26 0°43'43 1°**尽**00'08 21.12793 AU max. Earth dist. -5221 Dec 31 j 14:53 max. Earth dist. -5212 Feb 01 j 07:33 2°る36'10 21.05854 AU -5220 Apr 19 j 03:31 4°**х** 56′58 -5212 May 21 j 19:44 6°836'06 retrograde retrograde min. Earth dist. -5220 Jul 05 j 07:25 3°**尽**00'12 19.13277 AU -5212 Aug 07 j 07:02 4°る36'23 0°-49'-4 opposition 4°る38'01 19.04309 AU -5220 Jul 06 j 10:08 2°**∡**′57'31 -5212 Aug 06 j 15:05 opposition 0°-25'-59 min. Earth dist. -5220 Sep 19 j 12:58 1°×701'41 -5212 Oct 20 j 22:20 direct direct 2°る39'50 -5219 Jan 02 j 14:22 4°**₹**52'08 0°-25'-4 -5211 Feb 03 j 20:38 6°る32'52 0°-45'-17 conjunction conjunction -5219 Jan 02 j 14:22 4°**≯**52'07 0°25'20 -5211 Feb 03 j 20:38 minimum elong minimum elong 6°る32'52 0°45'36 -5219 Jan 03 j 19:36 -5211 Feb 04 j 13:59 max. Earth dist. 4°**∡**56'17 21.13568 AU max. Earth dist. 6°る35'20 21.02580 AU -5219 Apr 23 j 12:00 8°**≯**53'12 -5211 May 26 j 05:39 10°る35'55 retrograde retrograde -5219 Jul 10 j 16:09 6°**х** 53′44 0°-29'-27 -5211 Aug 11 j 12:27 8° **ප**36'04 0°-51'-3 opposition opposition min. Earth dist. -5219 Jul 09 j 13:08 6°**∡**¹56'27 19.13845 AU min. Earth dist. -5211 Aug 10 j 21:28 8°る37'36 19.00775 AU direct -5219 Sep 23 j 17:37 4°**х** 57′55 direct -5211 Oct 25 j 04:44 6°**る**39'13 -5210 Feb 08 j 05:25 10°る32'57 conjunction -5218 Jan 06 j 19:32 8°**∡**¹48'20 0°-28'-8 conjunction 0°-46'-58 minimum elong -5218 Jan 06 j 19:32 8°**∡**¹48'20 0°28'24 minimum elong -5210 Feb 08 j 05:25 10°る32'57 0°47'16 max. Earth dist. -5218 Jan 07 j 23:54 8°**∡**752'21 21.13925 AU max. Earth dist. -5210 Feb 08 j 20:53 10°る35'09 20.98803 AU retrograde -5218 Apr 27 j 18:48 12°**∡** 49'29 retrograde -5210 May 30 j 12:55 14°る36'25 opposition -5218 Jul 14 j 22:07 10° ₹ 50'01 0°-32'-46 opposition -5210 Aug 15 j 18:04 12°る36'24 0°-52'-47 min. Earth dist. -5218 Jul 13 j 20:55 10° ₹752'34 19.13994 AU min. Earth dist. -5210 Aug 15 j 05:43 12°る37'40 18.96773 AU direct -5218 Sep 27 i 21:15 8°**х** 54′12 direct -5210 Oct 29 j 08:55 10°る39'15 conjunction -5217 Jan 11 i 01:16 12° ₹ 44'44 0°-31'-5 conjunction -5209 Feb 12 i 14:57 14°₹33'45 0°-48'-24 -5209 Feb 12 j 14:57 14°**ට**33'45 minimum elong -5217 Jan 11 i 01:16 12° ₹ 44'44 0°31'22 minimum elong 0°48'43 max. Earth dist. -5217 Jan 12 j 04:50 12° ₹ 48'38 21.13867 AU max. Earth dist. -5209 Feb 13 j 04:22 14°る35'40 20.94607 AU retrograde -5217 May 02 j 04:02 16° ₹ 46'01 retrograde -5209 Jun 03 j 22:56 18°337'41 min. Earth dist. -5217 Jul 18 j 02:35 14° ₹ 49'05 19.13704 AU opposition -5209 Aug 19 j 23:32 16°る37'30 0°-54'-15 -5217 Jul 19 j 03:37 14° ₹ 46'33 0°-35'-57 -5209 Aug 19 j 12:12 16°る38'40 18.92381 AU min. Earth dist. opposition -5217 Oct 02 j 01:27 12° ₹ 50'43 -5209 Nov 02 j 15:10 14°る40'00 direct direct -5208 Feb 17 j 01:02 18° \(\frac{1}{3}5'25 \) 0°-49'-37 -5216 Jan 15 j 07:19 16° **₹** 41'27 0°-33'-53 conjunction conjunction -5208 Feb 17 j 01:02 18°る35'25 0°49'54 -5216 Jan 15 j 07:19 16° **₹** 41'27 0°34'11 minimum elong minimum elong -5216 Jan 16 j 09:34 16° **₹** 45'10 21.13335 AU -5208 Feb 17 j 12:34 18° る37'03 20.90029 AU max. Earth dist. max. Earth dist. -5216 May 05 j 10:40 20° ₹ 42'56 -5208 Jun 07 j 07:25 22°♂39'51 retrograde retrograde -5216 Jul 21 j 10:28 18° **₹** 45'47 19.12927 AU -5208 Aug 23 j 05:25 20°る39'31 0°-55'-28 min. Earth dist. opposition opposition -5216 Jul 22 j 09:14 18° **₹** 43'29 0°-38'-58 min. Earth dist. -5208 Aug 22 j 20:33 20°중40'26 18.87640 AU direct -5216 Oct 05 j 04:56 16° ₹ 47'35 direct -5208 Nov 05 j 20:02 18°₹41'42 -5207 Feb 20 j 11:35 22°る38'04 0°-50'-35 conjunction -5215 Jan 18 j 13:44 20° **₹** 38'37 0°-36'-32 conjunction minimum elong -5215 Jan 18 j 13:44 20° ₹38'37 0°36'50 minimum elong -5207 Feb 20j11:35 22°る38'04 0°50'53 max. Earth dist. -5215 Jan 19 j 14:42 20° ₹ 42'09 21.12310 AU max. Earth dist. -5207 Feb 20 j 21:02 22° 중39'25 20.85148 AU retrograde -5215 May 09 j 20:29 24° ₹ 40'21 retrograde -5207 Jun 11 j 18:02 26°₹43'06 -5215 Jul 26 j 14:38 22° ₹740'52 0°-41'-48 -5207 Aug 27 j 11:29 24°정42'38 0°-56'-25 opposition opposition -5215 Jul 25 j 16:26 22° ₹ 43'07 19.11630 AU -5207 Aug 27 j 03:32 24°る43'27 18.82617 AU min. Earth dist. min. Earth dist. -5215 Oct 09 j 09:51 20° ₹ 44'54 -5207 Nov 10 j 02:36 22°る44'28 direct direct -5214 Jan 22 j 20:42 24° ₹36'19 0°-39'-1 -5206 Feb 24 i 23:00 26°₹41'54 0°-51'-19 conjunction conjunction -5214 Jan 22 i 20:42 24° ₹36'19 0°39'20 -5206 Feb 24 i 23:00 26°**ਠ**41'54 0°51'35 minimum elong minimum elong -5206 Feb 25 j 06:39 26°る43'00 20.79986 AU max. Earth dist. -5214 Jan 23 j 19:56 24° ₹739'36 21.10731 AU max. Earth dist. retrograde -5214 May 14 j 03:08 28° ₹38'20 -5206 May 02 j 18:02 0°**≈** opposition -5214 Jul 30 j 20:10 26° **₹** 38'49 0°-44'-26 retrograde -5206 Jun 16 j 03:46 0°≈47'34 min. Earth dist. -5214 Jul 30 j 00:32 26° ₹ 40'48 19.09771 AU -5206 Jul 31 j 05:51 30°R ₹ -5214 Oct 13 j 12:55 24° ₹ 42'42 -5206 Aug 31 j 17:53 28°る46'59 0°-57'-6 direct opposition min. Earth dist. -5206 Aug 31 j 12:23 28°정47'33 18.77332 AU conjunction -5213 Jan 27 j 04:14 28° **₹** 34'35 0°-41'-18 direct -5206 Nov 14 j 08:10 26°₹48'30 minimum elong -5213 Jan 27 j 04:14 28° **₹** 34'35 0°41'36 -5205 Feb 15 j 16:53 0°≈ max. Earth dist. -5213 Jan 28 j 01:38 28° ₹37'37 21.08592 AU -5213 Feb 21 j 19:28 0°궁 -5205 Mar 01 j 11:13 0°≈47'06 0°-51'-47 conjunction retrograde -5213 May 18 j 13:10 2°る36'55 -5205 Mar 01 j 11:13 minimum elong 0°**≈**47'06 0°52'04 -5205 Mar 01 j 16:27 min. Earth dist. -5213 Aug 03 j 06:54 0°る39'13 19.07330 AU max. Earth dist. 0°**≈**47'51 20.74595 AU opposition -5213 Aug 04 j 01:35 0°**る**37'19 0°-46'-52 retrograde -5205 Jun 20 j 15:42 4°≈53'27 -5213 Aug 19 j 15:13 30°R.✓ opposition -5205 Sep 05 j 00:39 2°**≈**52'47 0°-57'-30 direct -5213 Oct 17 j 18:59 28° ₹ 41'00 min. Earth dist. -5205 Sep 04 j 20:17 2°≈53'14 18.71819 AU -5213 Dec 13 j 13:27 0°る direct -5205 Nov 18 j 15:38 0°≈53'59

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5204 in astronomical counting style is the year 5205 BCE in historical counting style. -5204 Mar 05 i 00:11 4°≈53'51 0°-52'00 min. Earth dist. -5197 Oct 08 i 16:00 6°**)** 42'27 18.18929 AU conjunction -5204 Mar 05 i 00:11 4°≈53'51 0°52'16 direct -5197 Dec 21 j 22:54 4°**)** 41'57 minimum elong -5204 Mar 05 j 03:39 max. Earth dist. 4°≈54'20 20.68959 AU -5196 Apr 09 j 16:13 -5204 Jun 24 j 02:31 8°**)** 53'51 0°-43'-45 9°200'56 retrograde conjunction -5204 Sep 08 j 07:55 7°≈00'12 0°-57'-36 -5196 Apr 09 j 16:13 8°**¥**53'51 opposition minimum elong 0°43'53 -5204 Sep 08 j 06:05 -5196 Apr 08 j 23:55 min. Earth dist. 7°≈00'24 18.66067 AU max. Earth dist. 8°**¥**51'27 20.15229 AU -5196 Jul 29 j 00:22 13°**米**07'33 direct -5204 Nov 21 j 22:08 5°≈01'06 retrograde -5196 Oct 11 j 15:22 11°**米**05'58 0°-47'-22 opposition conjunction -5203 Mar 09 j 13:59 9°≈02'17 0°-51'-57 min. Earth dist. -5196 Oct 12 j 06:06 11° **★**04'23 18.11538 AU minimum elong -5203 Mar 09 j 14:00 9°≈02'18 0°52'13 direct -5196 Dec 25 j 12:10 9°**₩**03'38 max. Earth dist. -5203 Mar 09 j 14:46 9°≈02'24 20.63108 AU -5195 Apr 14 j 12:51 13° **)** 17'09 0°-41'-29 retrograde -5203 Jun 28 j 15:53 13°**≈**10′10 conjunction -5195 Apr 14 j 12:51 13°**米**17'09 0°41'37 opposition -5203 Sep 12 j 15:37 11°**≈**09'23 0°-57'-24 minimum elong min. Earth dist. -5203 Sep 12 j 15:13 11°**≈**09'25 18.60096 AU max. Earth dist. -5195 Apr 13 j 17:19 13°**)** 14'15 20.07860 AU direct -5203 Nov 26 j 06:45 9°≈09'58 retrograde -5195 Aug 02 j 17:19 17°**米**31'41 opposition -5195 Oct 16 j 04:14 15°**∺**29'55 0°-44'-43 conjunction -5202 Mar 14 j 04:46 13°≈12'35 0°-51'-37 min. Earth dist. -5195 Oct 16 j 20:42 15° **€**28'09 18.04211 AU minimum elong -5202 Mar 14 j 04:46 13°≈12'35 0°51'53 direct -5195 Dec 30 j 03:02 13°**∺**27'07 max. Earth dist. -5202 Mar 14 j 03:40 13°≈12'25 20.57003 AU -5202 Apr 15 i 03:12 15°≈ conjunction -5194 Apr 19 j 10:28 17°**)** 42'16 retrograde -5202 Jul 03 j 04:11 17°≈21'16 minimum elong -5194 Apr 19 j 10:28 17° **)** 42'16 0°39'03 opposition -5202 Sep 17 i 00:01 15°≈20'26 0°-56'-54 max. Earth dist. -5194 Apr 18 j 14:07 17° + 39'15 20.00575 AU min. Earth dist. -5202 Sep 17 i 02:20 15°≈20'11 18.53856 AU retrograde -5194 Aug 07 i 11:00 21° + 57'38 -5202 Sep 25 i 02:52 15°R≈ opposition -5194 Oct 20 i 17:57 19° **X** 55'44 0°-41'-47 direct -5202 Nov 30 j 14:45 13°≈20'41 min. Earth dist. -5194 Oct 21 j 11:49 19° ¥ 53'48 17.96992 AU -5201 Feb 02 j 13:26 15°≈ -5193 Jan 03 j 17:58 17° ¥ 52'30 direct max. Earth dist. -5201 Mar 18 j 20:32 17°≈24'46 0°-51'-1 conjunction -5201 Mar 18 j 20:32 17°≈24'46 0°51'14 -5193 Apr 24 j 08:40 22° ¥ 09'17 0°-36'-11 conjunction minimum elong -5201 Mar 18 j 16:10 17°≈24'08 20.50635 AU -5193 Apr 24 j 08:40 22°**₭**09'17 max. Earth dist. minimum elong 0°36'15 -5193 Aug 12 j 04:59 26°**₭**25'29 -5201 Jul 07 j 18:40 21°≈34'18 retrograde retrograde -5201 Sep 21 j 08:51 19°≈33'23 0°-56'-6 -5193 Oct 25 j 08:27 24° ¥23'27 0°-38'-35 opposition opposition -5193 Oct 26 j 03:57 24° **∺**21'20 17.89972 AU min. Earth dist. -5201 Sep 21 j 12:59 19°≈32'57 18.47347 AU min. Earth dist. -5201 Dec 05 j 00:50 17°≈33'16 -5192 Jan 08 j 10:58 22° **★** 19'48 direct direct -5192 Apr 27 j 08:03 26° ★34'40 19.86534 AU max. Earth dist. -5200 Mar 22 j 13:16 21°≈38'53 0°-50'-8 conjunction -5200 Mar 22 j 13:16 21°≈38'53 0°50'21 -5192 Apr 28 j 07:48 26° ★ 38'14 0°-33'-10 minimum elong conjunction max. Earth dist. -5200 Mar 22 j 06:54 21°≈37'57 20.43976 AU minimum elong -5192 Apr 28 j 07:49 26° ¥ 38'14 0°33'14 retrograde -5200 Jul 11 j 08:40 25°≈49'14 -5192 Jun 30 j 23:00 $0^{\circ}\Upsilon$ opposition -5200 Sep 24 j 18:33 23°≈48'14 0°-54'-58 retrograde -5192 Aug 15 j 23:49 0°Y55'14 min. Earth dist. -5200 Sep 25 j 01:18 23°≈47'32 18.40550 AU -5192 Oct 01 j 19:08 30°R ₩ -5200 Dec 08 j 10:39 21°≈47'44 -5192 Oct 28 j 23:50 28° ¥ 53'08 0°-35'-7 direct opposition min. Earth dist. -5192 Oct 29 j 20:14 28° ¥ 50'56 17.83191 AU -5199 Mar 27 j 06:35 25°≈54'52 0°-48'-57 direct -5191 Jan 12 j 04:05 26° **₭** 49'08 conjunction -5199 Mar 27 j 06:35 25°≈54'52 0°49'08 -5191 Apr 14 j 00:41 $0^{\circ}\Upsilon$ minimum elong -5199 Mar 26 j 20:46 25°≈53'26 20.37059 AU max. Earth dist. max. Earth dist. -5191 May 02 i 05:03 1°Υ05'12 19.79893 AU -5199 Jun 30 j 17:03 0°**)**€ -5199 Jul 16 i 00:03 -5191 May 03 i 07:26 1°**Y**09'11 0°-29'-56 retrograde 0°\06'05 conjunction -5191 May 03 i 07:26 -5199 Jul 31 i 08:14 30°R≈ minimum elong 1°**Y**09'11 0°29'57 -5199 Sep 29 i 04:48 28°≈04'57 0°-53'-32 retrograde -5191 Aug 20 i 19:00 5°Y27'01 opposition min. Earth dist. -5199 Sep 29 j 13:24 28°≈04'02 18.33514 AU opposition -5191 Nov 02 j 16:08 3°Υ24'51 0°-31'-25 direct -5199 Dec 12 j 22:11 26°≈04'01 min. Earth dist. -5191 Nov 03 j 14:13 3°**Y**′22'27 17.76699 AU -5198 Mar 28 j 10:21 0°**₩** direct -5190 Jan 16 j 22:43 1°Y20'31 5°Υ38'08 19.73542 AU max. Earth dist. -5190 May 07 j 05:25 conjunction -5198 Apr 01 j 01:04 0°**)** 12'43 0°-47'-30 minimum elong -5198 Apr 01 j 01:04 0°\(\mathbf{1}2'43\) 0°47'40 conjunction -5190 May 08 j 08:09 5°**Υ**42'11 0°-26'-29 max. Earth dist. -5198 Mar 31 j 13:30 0°**升**11'01 20.29911 AU minimum elong -5190 May 08 j 08:09 5°**Υ**42'11 0°26'30 -5190 Aug 25 j 15:39 10°**Υ**00'48 -5198 Jul 20 j 15:29 4°**)** 24'45 retrograde retrograde -5198 Oct 03 j 15:37 2°**)** 23'29 0°-51'-46 -5190 Nov 07 j 09:11 7°**Υ**'58'38 0°-27'-28 opposition opposition 7°**Υ**56'10 17.70486 AU -5198 Oct 04 j 02:38 2°**₭**22'19 18.26274 AU -5190 Nov 08 j 07:58 min. Earth dist. min. Earth dist. -5198 Dec 17 j 09:50 0°**)** 22′06 -5189 Jan 21 j 18:25 5°Y54'00 direct direct -5189 May 12 j 04:25 10° **Y** 12'49 19.67472 AU max. Earth dist. conjunction -5197 Apr 05 j 20:16 4° **★** 32'23 0°-45'-45 minimum elong -5197 Apr 05 j 20:16 4°**)** 32′23 0°45'56 conjunction -5189 May 13 j 09:29 10° Υ 17'15 0° -22'-50 max. Earth dist. -5197 Apr 05 j 05:11 4°**₭**30'10 20.22613 AU minimum elong $-5189 \text{ May } 13 \text{ j } 09:29 \quad 10^{\circ} \Upsilon 17'15$ 0°22'49 -5197 Jul 25 j 07:43 8°**)** 45'16 -5189 Aug 30 j 12:06 14°**Υ**36'38 retrograde retrograde -5197 Oct 08 j 03:09 6°\(\)43'49 0°-49'-43 -5189 Nov 12 j 03:24 12°**Υ**'34'29 0°-23'-19 opposition opposition

•	omena of Uranus fr		•				age 15
	ical year style is used: Tl						
min. Earth dist.	-5189 Nov 13 j 04:04		17.64568 AU	minimum elong	-5182 Jun 16 j 08:31		0°06'21
direct	-5188 Jan 26 j 14:36			behind sun begin	-5182 Jun 16 j 02:10	13° 8 09'37	
max. Earth dist.	-5188 May 16 j 05:56	14° Ƴ 49'49	19.61686 AU	behind sun end	-5182 Jun 16 j 14:52	13° 8 11'34	
					-5182 Jul 16 j 05:40	15° 8	
conjunction	-5188 May 17 j 11:24	14° Ƴ 54'19	0°-19'-1	retrograde	-5182 Oct 02 j 07:08	17° 8 33'42	
minimum elong	-5188 May 17 j 11:24	14° Y 54'19	0°18'59	opposition	-5182 Dec 14 j 10:05	15° 8 31'23	0°09'10
retrograde	-5188 Sep 03 j 10:37	19° Ƴ 14'26		min. Earth dist.	-5182 Dec 15 j 14:33	15° 8 28'16	17.31853 AU
opposition	-5188 Nov 15 j 22:26		0°-18'-59		-5182 Dec 26 j 12:03		
min. Earth dist.	-5188 Nov 16 j 23:27		17.58914 AU	direct	-5181 Feb 28 j 16:09		
direct	-5187 Jan 30 j 12:49	15° ℃ 07'07	17.00511110		-5181 May 01 j 10:18		
max. Earth dist.	-5187 May 21 j 06:41		19.56160 AU	max. Earth dist.	-5181 Jun 20 j 03:44		10 20291 ATT
max. Earth dist.	-318/ May 21 J 00.41	19 20 29	19.30100 AU	max. Earm dist.	-3181 Juli 20 J 03.44	1/ 032 04	19.30281 AU
aamiumatian	5197 May 22 : 14:00	19° Ƴ 33'18	0°-15'-3	agnismation	5101 Jun 21:12:20	170857115	0°10'24
conjunction	-5187 May 22 j 14:00			conjunction	-5181 Jun 21 j 12:39		
minimum elong	-5187 May 22 j 14:00	19° Ƴ 33'18	0°14'59	minimum elong	-5181 Jun 21 j 12:39		0°10'37
behind sun begin	-5187 May 22 j 11:50	19° Ƴ 32'59		behind sun begin	-5181 Jun 21 j 07:28		
behind sun end	-5187 May 22 j 16:11	19° Ƴ 33'38		behind sun end	-5181 Jun 21 j 17:50	17° 8 58'02	
retrograde	-5187 Sep 08 j 07:56	23° Y 54′05		retrograde	-5181 Oct 07 j 06:33	22° 8 20'35	
opposition	-5187 Nov 20 j 18:22	21° Y 51'56	0°-14'-29	opposition	-5181 Dec 19 j 10:40	20° 8 18'15	0°13'53
min. Earth dist.	-5187 Nov 21 j 21:22	21° Y 48'59	17.53538 AU	min. Earth dist.	-5181 Dec 20 j 15:39	20° 8 15'04	17.28952 AU
direct	-5186 Feb 04 i 10:34	19° Ƴ 46'28		direct	-5180 Mar 04 j 18:14		
max. Earth dist.	-5186 May 26 j 09:11		19.50921 AU	max. Earth dist.	-5180 Jun 24 j 07:19		19 27688 AU
man. Bartin diot.	2100 1114) 20) 09.111	2. 10,00	19.00921110	man. Darut Gigt.	2.507.17	22 033 13	19.27000110
conjunction	-5186 May 27 j 17:12	24° ℃ 14'01	0°-10'-57	conjunction	-5180 Jun 25 j 16:22	220844432	0°14'35
				-	3		
minimum elong	-5186 May 27 j 17:13		0°10'52	minimum elong	-5180 Jun 25 j 16:22		0°14'47
behind sun begin	-5186 May 27 j 12:08			behind sun begin	-5180 Jun 25 j 13:49		
behind sun end	-5186 May 27 j 22:17	24° Y 14'47		behind sun end	-5180 Jun 25 j 18:56		
retrograde	-5186 Sep 13 j 08:00	28° Ƴ 35'24		retrograde	-5180 Oct 11 j 07:35		
opposition	-5186 Nov 25 j 15:11	26° Ƴ 33'14		opposition	-5180 Dec 23 j 11:38		0°18'30
min. Earth dist.	-5186 Nov 26 j 18:10	26° Ƴ 30′17	17.48439 AU	min. Earth dist.	-5180 Dec 24 j 15:12	25° 8 02'43	17.26678 AU
direct	-5185 Feb 09 j 11:12	24° Ƴ 27'31		direct	-5179 Mar 09 j 22:21	22° 8 58'50	
max. Earth dist.	-5185 May 31 j 11:40	28° Ƴ 51'11	19.45969 AU				
	• •			conjunction	-5179 Jun 30 j 20:18	27° 8 32'23	0°18'40
conjunction	-5185 Jun 01 j 20:42	28° Y 56′18	0°-6'-47	minimum elong	-5179 Jun 30 j 20:18		0°18'54
minimum elong	-5185 Jun 01 j 20:43	28° Y 56'18		max. Earth dist.	-5179 Jun 29 j 13:16		
behind sun begin	-5185 Jun 01 j 14:24	28° Y ′55′21	0 00 11	max. Earth dist.	-5179 Aug 10 j 22:23	0°II	19.23733110
behind sun end	-5185 Jun 02 j 03:02	28° Υ 57'15		retrograde	-5179 Oct 16 j 07:14	1° II 56'03	
bennia sun ena	•			retrograde	-5179 Dec 26 j 03:35		
	-5185 Jun 19 j 02:43	0°8			•		0000101
retrograde	-5185 Sep 18 j 06:01	3° 8 18'13		opposition	-5179 Dec 28 j 13:09		
opposition	-5185 Nov 30 j 12:56	1° 8 16'01		min. Earth dist.	-5179 Dec 29 j 16:33		17.25059 AU
min. Earth dist.	-5185 Dec 01 j 17:35		17.43666 AU	direct	-5178 Mar 15 j 02:24		
	-5185 Dec 31 j 16:23	30° ₹Ƴ			-5178 May 28 j 03:12	Π $\circ 0$	
direct	-5184 Feb 14 j 10:30	29° Ƴ 10′02					
	-5184 Mar 29 j 10:19	9° 8		conjunction	-5178 Jul 05 j 23:54	2° Ⅲ 20'40	0°22'38
max. Earth dist.	-5184 Jun 04 j 14:49	3° 8 34'42	19.41382 AU	minimum elong	-5178 Jul 05 j 23:54	2° Ⅱ 20'40	0°22'53
	v			max. Earth dist.	-5178 Jul 04 j 16:58	2° Ⅱ 15'46	19.24465 AU
conjunction	-5184 Jun 06 j 00:30	3° 8 39'57	0°-2'-31	retrograde	-5178 Oct 21 j 07:50	6° Ⅱ 44'24	
minimum elong	-5184 Jun 06 j 00:29	3° 8 39'57		opposition	-5177 Jan 02 j 15:15	4° ∏ 42'08	0°27'23
behind sun begin	-5184 Jun 05 j 17:44	3° 8 38'55	0 02 24	min. Earth dist.	-5177 Jan 03 j 17:06		17.24136 AU
_					-		17.24130 AU
behind sun end	-5184 Jun 06 j 07:14	3° 8 40'58		direct	-5177 Mar 20 j 07:23	2° Ⅱ 35'15	10.00001 177
retrograde	-5184 Sep 22 j 06:58	8° 8 02'20		max. Earth dist.	-5177 Jul 09 j 23:00	7°Щ04'48	19.23881 AU
opposition	-5184 Dec 04 j 11:13	6° 8 00'05					
min. Earth dist.	-5184 Dec 05 j 15:22		17.39274 AU	conjunction	-5177 Jul 11 j 03:19	7° Ⅱ 09'17	0°26'28
asc. node	-5183 Jan 03 j 23:35	4° 8 45'20		minimum elong	-5177 Jul 11 j 03:18	7° Ⅱ 09'17	0°26'43
direct	-5183 Feb 18 j 12:27	3° 8 53'52		retrograde	-5177 Oct 26 j 08:23	11° Ⅲ 33′02	
max. Earth dist.	-5183 Jun 09 j 18:51	8° 8 19'32	19.37193 AU	opposition	-5176 Jan 07 j 17:54	9° Ⅱ 30'53	0°31'33
	ž			min. Earth dist.	-5176 Jan 08 j 18:52		17.23880 AU
conjunction	-5183 Jun 11 j 04:30	8° 8 24'47	0°01'52	direct	-5176 Mar 24 j 12:36	7° Ⅱ 24'06	
minimum elong	-5183 Jun 11 j 04:29	8° 8 24'47		max. Earth dist.	-5176 Jul 14 j 02:31		19.23961 AII
behind sun begin	-5183 Jun 10 j 21:44	8° 8 23'45	3 0 <u>2 02</u>	Lui ui uist.	51,50ui 17j 02.51	433 77	->.25>01710
behind sun end	3	8° 8 25'48		conjunction	5176 Jul 15:06:22	110π50100	0°30'06
	-5183 Jun 11 j 11:14			3	-5176 Jul 15 j 06:22		
retrograde	-5183 Sep 27 j 05:57	12° 8 47'33	0004122	minimum elong	-5176 Jul 15 j 06:22		0°30'23
opposition	-5183 Dec 09 j 10:25	10° 8 45'17		retrograde	-5176 Oct 30 j 09:11		
min. Earth dist.	-5183 Dec 10 j 15:50		17.35314 AU	opposition	-5175 Jan 11 j 20:46		
direct	-5182 Feb 23 j 13:08	8° 8 38'49		min. Earth dist.	-5175 Jan 12 j 20:25		17.24284 AU
max. Earth dist.	-5182 Jun 14 j 22:24	13° 8 05'15	19.33477 AU	direct	-5175 Mar 29 j 17:28		
				max. Earth dist.	-5175 Jul 19 j 07:59	16° Ⅱ 43'03	19.24669 AU
	5102 I 16:00.21	120 10126	0006110				

-5182 Jun 16 j 08:31 13°**8**10'36 0°06'10

conjunction

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5175 in astronomical counting style is the year 5176 BCE in historical counting style. -5175 Jul 20 j 09:15 16°**Д**47'04 0°33'33 minimum elong -5167 Aug 27 j 09:24 24°952'51 0°51'04 conjunction -5175 Jul 20 j 09:15 16°**Ⅱ**47'04 minimum elong 0°33'49 max. Earth dist. -5167 Aug 27 j 00:01 24°551'22 19.48416 AU -5175 Nov 04 j 10:32 21°**Д**10'35 -5167 Dec 12 j 08:48 29°512'23 retrograde retrograde -5166 Feb 25 j 04:06 27°5511'03 0°57'03 -5174 Jan 17 j 00:09 19°**Ⅲ**08'42 0°39'14 opposition opposition -5174 Jan 17 j 22:24 19°**Д**06'17 17.25270 AU -5166 Feb 25 j 10:37 27°510'22 17.50911 AU min. Earth dist. min. Earth dist. -5174 Apr 03 j 22:44 17°**Д**02'12 -5166 May 13 j 12:11 25°506'22 direct direct max. Earth dist. -5174 Jul 24 j 11:08 21°**Д**31'57 19.25936 AU -5166 Sep 01 j 05:36 29°532'17 0°51'29 conjunction -5166 Sep 01 j 05:36 29°532'17 0°51'45 -5174 Jul 25 j 11:34 21°**Д**35'50 0°36'45 conjunction minimum elong -5174 Jul 25 j 11:34 21°**Д**35'50 minimum elong 0°37'02 max. Earth dist. -5166 Aug 31 j 23:46 29°531'21 19.53498 AU -5174 Nov 09 j 11:37 25°**Д**59'07 retrograde -5166 Sep 08 j 13:40 $0^{\circ}\Omega$ -5173 Jan 22 j 03:51 23°**II**57'21 0°42'40 -5166 Dec 17 j 05:01 opposition retrograde 3°**£**51′05 -5173 Jan 23 j 00:58 23°**Д**55'04 17.26817 AU -5165 Mar 02 j 06:28 min. Earth dist. opposition 1°**Ω**49'50 0°57'36 direct -5173 Apr 09 j 03:25 21°**Д**51'01 min. Earth dist. -5165 Mar 02 j 11:19 1°**Ω**49'19 17.56239 AU -5165 Apr 24 j 15:06 30°Rூ conjunction -5173 Jul 30 j 13:31 26°**Ⅲ**24'12 0°39'41 direct -5165 May 18 j 14:12 29°545'30 minimum elong -5173 Jul 30 j 13:30 26°**Ⅲ**24'12 0°39'58 -5165 Jun 11 j 03:08 $0^{\circ}\Omega$ max. Earth dist. -5173 Jul 29 j 15:31 26°**Д**20'42 19.27745 AU -5173 Oct 04 j 07:28 0ಂಪ conjunction -5165 Sep 06 j 00:52 4°**Ω**09'57 0°51'50 retrograde -5173 Nov 14 j 13:06 0°547'10 minimum elong -5165 Sep 06 j 00:52 4°**Ω**09'57 0°52'04 -5173 Dec 27 j 05:57 30°RII max. Earth dist. -5165 Sep 05 j 20:54 4°**Ω**09'20 19.59075 AU opposition -5172 Jan 27 i 07:41 28°**II**45'30 0°45'47 retrograde -5165 Dec 22 i 02:33 8°**Ω**28'00 min. Earth dist. -5172 Jan 28 j 02:44 28°**Д**43'27 17.28867 AU opposition -5164 Mar 06 j 08:00 6°Ω26'51 0°57'47 direct -5172 Apr 13 j 08:41 26° **∏**39'23 min. Earth dist. -5164 Mar 06 i 09:15 6°**Ω**26'43 17.62046 AU -5172 Jul 15 j 13:24 0ಂತಾ direct -5164 May 22 j 16:19 4°Ω22'54 -5172 Aug 03 j 14:43 1°9511'55 0°42'21 -5164 Sep 09 j 19:19 8°Ω45'53 0°51'51 conjunction conjunction -5172 Aug 03 j 14:43 1°911'55 -5164 Sep 09 j 19:19 8°**Ω**45'53 0°52'06 minimum elong 0°42'38 minimum elong -5172 Aug 02 j 18:07 1°508'39 19.30039 AU max. Earth dist. -5164 Sep 09 j 19:04 8°**Ω**45'50 19.65100 AU max. Earth dist. -5172 Nov 18 j 13:33 -5164 Dec 25 j 21:40 13° Ω 03'08 5°934'30 retrograde retrograde -5163 Mar 11 j 09:10 11° Ω 02'09 0°57'36 -5171 Jan 31 j 11:36 3°532'55 0°48'35 opposition opposition -5171 Feb 01 j 05:40 -5163 Mar 11 j 08:40 11°**Ω**02'12 17.68269 AU min. Earth dist. min. Earth dist. 3°530'59 17.31402 AU -5163 May 27 j 16:13 8°**Ω**58'38 direct -5171 Apr 18 j 13:10 1°926'59 direct -5163 Sep 14 j 12:43 13° Ω 20'04 0°51'32 -5171 Aug 08 j 15:21 5°958'45 0°44'42 conjunction conjunction -5163 Sep 14 j 12:43 13° Ω 20'04 0°51'45 -5171 Aug 08 j 15:21 5°958'45 0°44'59 minimum elong minimum elong -5171 Aug 07 j 20:53 5°955'49 19.32806 AU -5163 Sep 14 j 14:05 13° Ω 20'16 19.71518 AU max. Earth dist. max. Earth dist. retrograde -5171 Nov 23 j 14:09 10°520'50 -5163 Oct 11 j 20:43 15°**Ω** opposition -5170 Feb 05 j 15:18 8°519'20 0°51'01 retrograde -5163 Dec 30 j 18:20 17°**Ω**36'33 min. Earth dist. -5170 Feb 06 j 06:46 8°517'41 17.34382 AU opposition -5162 Mar 16 j 09:39 15°**Ω**35'42 0°57'03 direct -5170 Apr 23 j 18:59 6°9513'38 min. Earth dist. -5162 Mar 16 j 05:54 15°**Ω**36'06 17.74854 AU -5162 Mar 30 j 21:51 15°R**Ω** -5170 Aug 13 j 15:16 10°544'28 0°46'43 direct -5162 Jun 01 j 15:59 13°**Ω**32'39 conjunction -5170 Aug 13 j 15:16 10°544'28 0°47'00 -5162 Jul 30 j 17:59 $15^{\circ}\Omega$ minimum elong -5170 Aug 12 j 22:56 10°541'52 19.36014 AU max. Earth dist. -5170 Nov 28 j 13:08 15°506'00 $-5162 \text{ Sep } 19 \text{ j } 05:27 \quad 17^{\circ} \Omega 52'30 \quad 0^{\circ} 50'54$ retrograde conjunction -5169 Feb 10 j 19:07 13°504'33 0°53'06 $-5162 \text{ Sep } 19 \text{ j } 05:27 \quad 17^{\circ} \Omega 52'30 \quad 0^{\circ} 51'07$ opposition minimum elong -5169 Feb 11 i 09:32 13°503'01 17.37820 AU -5162 Sep 19 j 10:31 17° Ω 53'18 19.78253 AU min. Earth dist. max. Earth dist. -5169 Apr 28 j 23:06 10°\$59'04 -5161 Jan 04 i 13:01 $22^{\circ}\Omega$ 08'11 direct retrograde opposition -5161 Mar 21 i 09:42 $20^{\circ}\Omega$ 07'31 0° 56'08 -5169 Aug 18 i 14:08 15°\$28'49 0°48'25 min. Earth dist. -5161 Mar 21 j 04:08 $20^{\circ}\Omega$ 08'05 17.81713 AU conjunction -5169 Aug 18 j 14:08 15°528'49 0°48'43 direct -5161 Jun 06 j 14:14 18° Ω 04'57 minimum elong max. Earth dist. -5169 Aug 17 j 23:54 15°\$26'34 19.39688 AU -5169 Dec 03 j 12:54 19°549'45 retrograde conjunction -5161 Sep 23 j 21:06 22°**Q**23'10 0°49'57 opposition -5168 Feb 15 j 22:29 17°5548'20 0°54'48 minimum elong -5161 Sep 23 j 21:06 $22^{\circ}\Omega$ 23'10 0° 50'09 min. Earth dist. -5168 Feb 16 j 09:45 17°5547'08 17.41711 AU max. Earth dist. -5161 Sep 24 j 03:32 22°**Ω**24'09 19.85225 AU direct -5168 May 03 j 04:34 15°5543'06 retrograde -5160 Jan 09 j 08:27 26°**Ω**38'02 -5160 Mar 25 j 09:01 $24^{\circ}\Omega$ 37'31 $0^{\circ}54'54$ opposition -5168 Aug 22 j 12:17 20°511'40 0°49'47 -5160 Mar 25 j 00:43 $24^{\circ}\Omega$ 38'22 17.88776 AU conjunction min. Earth dist. -5168 Aug 22 j 12:17 20°511'40 0°50'04 direct -5160 Jun 10 j 11:50 22° **Q**35'24 minimum elong -5168 Aug 22 j 00:56 20°509'53 19.43810 AU max. Earth dist. retrograde -5168 Dec 07 j 10:15 24°531'55 conjunction -5160 Sep 27 j 12:13 26° Ω52'00 0°48'42 opposition -5167 Feb 20 j 01:30 22°530'33 0°56'07 minimum elong -5160 Sep 27 j 12:13 $26^{\circ}\Omega 52'00$ $0^{\circ}48'52$ min. Earth dist. -5167 Feb 20 j 11:33 22°529'29 17.46071 AU max. Earth dist. -5160 Sep 27 j 21:59 26°Ω53'30 19.92347 AU direct -5167 May 08 j 07:56 20°\$25'34 -5160 Nov 23 j 11:15 0°m retrograde -5159 Jan 13 j 02:34 1° M) 06'00 -5167 Aug 27 j 09:24 24°552'51 0°50'48 -5159 Mar 07 j 11:27 30°RΩ conjunction

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5159 in astronomical counting style is the year 5160 BCE in historical counting style. -5159 Mar 30 j 07:31 29° Ω 05'39 0°53'19 retrograde -5151 Feb 17 i 00:18 5°**♀**37'02 opposition opposition min. Earth dist. -5159 Mar 29 j 21:27 29° Ω 06'41 17.95938 AU -5151 May 05 j 14:33 3°**△**37'07 0°31'21 -5159 Jun 15 j 09:24 $27^{\circ}\Omega$ 04'00 min. Earth dist. -5151 May 04 j 13:33 3°**2**39'38 18.51699 AU direct -5159 Sep 10 j 09:28 -5151 Jul 21 j 05:15 1°**£**38'25 direct -5159 Oct 02 j 02:22 -5151 Nov 04 j 15:08 5°**Ω**40'30 0°26'44 conjunction 1° m 18'55 0°47'10 conjunction minimum elong -5159 Oct 02 j 02:22 -5151 Nov 04 j 15:09 1° Mp 18'55 0°47'19 minimum elong 5°**2**40'30 0°26'43 -5159 Oct 02 j 13:11 -5151 Nov 05 j 16:39 max. Earth dist. 1° Mp 20'35 19.99540 AU max. Earth dist. 5°**♀**44'17 20.54998 AU retrograde -5158 Jan 17 j 20:20 5° M 32'06 retrograde -5150 Feb 21 j 11:53 9°**£**47′02 opposition -5158 Apr 04 j 05:29 3°Mp31'51 0°51'26 min. Earth dist. -5150 May 09 j 03:55 7°**•**49'47 18.58310 AU min. Earth dist. -5158 Apr 03 j 17:13 3°M 33'06 18.03150 AU opposition -5150 May 10 j 05:39 7°**-**47'11 0°27'46 -5158 Jun 20 j 05:08 -5150 Jul 25 j 16:42 direct 1°m/30'39 direct 5°**-**48'51 conjunction -5158 Oct 06 j 15:46 5° m 43'53 0°45'21 conjunction -5150 Nov 08 j 22:40 9°**£**49'35 0°23'27 minimum elong -5158 Oct 06 j 15:47 5° m 43'54 0°45'29 minimum elong -5150 Nov 08 j 22:41 9°**£**49'35 0°23'25 max. Earth dist. -5158 Oct 07 j 05:39 5° Mp 46'01 20.06741 AU max. Earth dist. -5150 Nov 10 j 02:19 9°**£**53'40 20.61541 AU retrograde -5157 Jan 22 j 13:31 9° m 56'12 retrograde -5149 Feb 25 j 23:28 13°**♀**55'27 opposition -5157 Apr 09 j 02:39 7° m 56'03 0°49'16 opposition -5149 May 14 j 19:47 11°**≏**55'43 0°24'03 min. Earth dist. -5157 Apr 08 j 12:26 7° m 57'30 18.10324 AU min. Earth dist. -5149 May 13 j 15:54 11° **2**58'31 18.64764 AU direct -5157 Jun 25 j 02:05 5° m 55'16 direct -5149 Jul 30 j 05:38 9°**£**57'45 conjunction -5157 Oct 11 i 04:20 10° m 06'49 0°43'18 conjunction -5149 Nov 13 i 05:44 13°**2**57'13 0°20'04 minimum elong -5157 Oct 11 i 04:20 10° m 06'49 0°43'25 minimum elong -5149 Nov 13 i 05:44 13°**2**57'13 0°20'01 max. Earth dist. -5157 Oct 11 j 19:05 10° m 09'04 20.13886 AU max. Earth dist. -5149 Nov 14 i 10:02 14° **2**01'23 20.67895 AU retrograde -5156 Jan 27 j 05:05 14° mp 18'15 retrograde -5148 Mar 01 i 09:52 18° **2**02'28 opposition -5156 Apr 12 i 22:50 12° mb 18'10 0°46'49 min. Earth dist. -5148 May 17 j 05:12 16° **2**05'39 18.71017 AU min. Earth dist. -5156 Apr 12 j 07:01 12° m 19'47 -5148 May 18 j 09:08 16°**2**02'51 18 17440 AU opposition 0°20'14 -5156 Jun 28 j 20:03 10° mp 17'45 -5148 Aug 02 j 15:07 14°**£**05'15 direct direct -5156 Oct 14 j 16:12 14° m 27'39 0°41'00 -5148 Nov 16 j 12:30 18° **2**03'32 0°16'35 conjunction conjunction -5156 Oct 14 j 16:12 14° m 27'39 0°41'06 -5148 Nov 16 j 12:30 18°**△**03'32 0°16'31 minimum elong minimum elong -5156 Oct 15 j 09:40 14° m 30'18 20.20951 AU -5148 Nov 17 j 18:23 18°**♀**07'55 20.74018 AU max. Earth dist. max. Earth dist. -5155 Jan 30 j 20:28 18° Mp 38'11 -5147 Mar 05 j 20:55 22°**♀**08'12 retrograde retrograde -5155 Apr 17 j 18:10 16° Mp 38'09 0°44'07 -5147 May 22 j 21:45 20°**♀**08'42 0°16'20 opposition opposition -5155 Apr 17 j 00:18 16° M 39'58 18.24446 AU -5147 May 21 j 16:06 20°**⊆**11'40 18.76989 AU min. Earth dist. min. Earth dist. -5155 Jul 03 j 15:34 14° M 38'06 -5147 Aug 07 j 02:30 18°**£**11'27 direct direct conjunction -5155 Oct 19 j 02:56 18° mp 46'19 0°38'29 conjunction -5147 Nov 20 j 18:39 22°**♀**08'38 0°13'03 minimum elong -5155 Oct 19 j 02:56 18° Mp 46'19 0°38'34 minimum elong -5147 Nov 20 j 18:40 22°**♀**08'38 0°12'58 max. Earth dist. -5155 Oct 19 j 21:23 18° m/49'06 20.27911 AU behind sun begin -5147 Nov 20 j 14:35 22°**♀**08'03 retrograde -5154 Feb 04 j 10:09 22° m 56'01 behind sun end -5147 Nov 20 j 22:44 22°**♀**09'13 -5154 Apr 22 j 12:44 20° m 55'58 0°41'12 max. Earth dist. -5147 Nov 22 j 00:55 22°**♀**13'03 20.79822 AU opposition min. Earth dist. -5154 Apr 21 j 17:30 20° m 57'55 18.31371 AU retrograde -5146 Mar 10 j 06:16 26°**2**12'48 direct -5154 Jul 08 j 07:27 18° m 56'15 min. Earth dist. -5146 May 26 j 04:41 24°**2**16'20 18.82626 AU -5146 May 27 j 09:55 24°**2**13'24 0°12'22 opposition -5154 Oct 23 j 13:07 23° m 02'50 0°35'47 conjunction direct -5146 Aug 11 i 10:29 22°**2**16'29 -5154 Oct 23 j 13:07 23° m 02'50 0°35'51 minimum elong -5154 Oct 24 j 10:16 23° m 06'02 20.34794 AU -5146 Nov 25 j 00:52 26° **2**12'38 0°09'28 max. Earth dist. conjunction retrograde -5153 Feb 08 i 23:39 27° m 11'41 minimum elong -5146 Nov 25 i 00:51 26° **2**12'38 0°09'21 min. Earth dist. -5153 Apr 26 i 08:41 25° m 13'51 18.38215 AU behind sun begin -5146 Nov 24 j 19:20 26°**2**11'51 opposition -5153 Apr 27 j 06:14 25° m 11'40 0°38'06 behind sun end -5146 Nov 25 j 06:23 26°**£**13'25 direct -5153 Jul 13 j 00:50 23° mp 12'17 max. Earth dist. -5146 Nov 26 j 08:10 26° **2**17'11 20.85263 AU -5145 Feb 16 j 21:17 0°M conjunction -5153 Oct 27 j 22:22 27° m 17'17 0°32'55 retrograde -5145 Mar 14 j 16:52 0°M16'17 minimum elong -5153 Oct 27 j 22:22 27° mp 17'17 0°32'56 -5145 Apr 09 j 23:40 30°R Ω max. Earth dist. -5153 Oct 28 j 20:33 27° m 20'37 20.41601 AU opposition -5145 May 31 j 21:08 28°**£**17'00 0°08'21 -5153 Dec 16 j 05:12 0∘ಹ min. Earth dist. -5145 May 30 j 14:39 28°**£**20'02 18.87853 AU -5152 Feb 13 j 12:11 direct -5145 Aug 15 j 20:28 26°**♀**20'21 retrograde 1°**£**25′19 -5152 Apr 16 j 11:06 30°R M -5145 Nov 24 j 19:38 0°M -5152 Apr 30 j 22:56 29° m 25'20 0°34'48 opposition -5145 Nov 29 j 06:42 0°M15'33 0°05'51 min. Earth dist. -5152 Apr 30 j 00:17 29° Mg 27'37 18.45000 AU conjunction direct -5152 Jul 16 j 14:21 27° m 26'16 minimum elong -5145 Nov 29 j 06:41 0°**M**15'33 0°05'44 -5152 Oct 05 j 16:08 behind sun begin -5145 Nov 29 j 00:24 0° M 14'40behind sun end -5145 Nov 29 j 12:59 0°M16'27 conjunction -5152 Oct 31 j 07:07 1°**≏**29'47 0°29'54 max. Earth dist. -5145 Nov 30 j 13:48 0°M20'04 20.90253 AU minimum elong -5152 Oct 31 j 07:07 1°**♀**29'47 0°29'54 retrograde -5144 Mar 18 j 01:14 4°M18'46 max. Earth dist. -5152 Nov 01 j 07:43 1°**≙**33'27 20.48345 AU min. Earth dist. -5144 Jun 03 j 02:24 2°M22'29 18.92611 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5144 in astronomical counting style is the year 5145 BCE in historical counting style. -5144 Jun 04 i 07:56 2°M19'32 0°04'19 conjunction -5138 Dec 26 i 18:23 28° M 09'09 0°-19'-2 opposition minimum elong direct -5144 Aug 19 j 03:29 0°M23'07 -5138 Dec 26 j 18:23 28°ML09'09 0°19'16 max. Earth dist. -5138 Dec 28 j 01:16 28° ML 13'33 21.11749 AU -5144 Dec 02 j 12:20 -5137 Jan 29 j 09:44 conjunction 4°M17'27 0°02'11 0°**∡**¹ -5144 Dec 02 j 12:20 4°**™**17'27 0°02'02 -5137 Apr 16 j 11:15 2°**х** 10′14 minimum elong retrograde -5144 Dec 02 j 05:46 behind sun begin -5137 Jul 03 j 17:44 0°**∡**10′50 4°ML16'32 opposition 0°-22'-53 -5144 Dec 02 j 18:53 -5137 Jul 02 j 12:52 0° **₹**13'44 19.12540 AU behind sun end 4°ML18′22 min. Earth dist. -5137 Jul 08 j 05:56 -5144 Dec 03 j 19:58 max. Earth dist. 4°M22'02 20.94758 AU 30°RML retrograde -5143 Mar 22 j 11:06 8°M20'13 direct -5137 Sep 16 j 23:31 28°M15'01 6°M24'05 18.96854 AU -5137 Nov 22 j 05:51 min. Earth dist. -5143 Jun 07 j 11:23 0°×7 opposition -5143 Jun 08 j 17:56 6° M21'02 0°00'17 -5143 Jul 04 j 15:35 -5137 Dec 30 j 23:18 2°**∡**105'32 0°-22'-18 desc. node 5°M21'49 conjunction -5143 Aug 23 j 12:06 -5137 Dec 30 j 23:18 direct 4° ML24'48 minimum elong 2°×105'32 0°22'34 -5136 Jan 01 j 05:22 max. Earth dist. 2°**₹**09'49 21.13133 AU conjunction -5143 Dec 06 j 17:41 8°M18'19 0°-1'-33 retrograde -5136 Apr 19 j 17:09 6°**х**¹06'34 minimum elong -5143 Dec 06 j 17:41 8°M18'19 0°01'43 min. Earth dist. -5136 Jul 05 j 20:58 4°**尽**09'53 19.13726 AU behind sun begin -5143 Dec 06 j 11:07 8°M17'24 opposition -5136 Jul 07 j 00:11 4°**х**¹07'09 0°-26'-27 behind sun end -5143 Dec 07 j 00:15 8°M19'14 direct -5136 Sep 20 j 02:45 2°**∡**11′22 max. Earth dist. -5143 Dec 08 j 00:54 8°M22'49 20.98741 AU retrograde -5142 Mar 26 j 18:46 12°M20'42 conjunction -5135 Jan 03 j 04:21 6°**∡**¹01'45 0°-25'-28 min. Earth dist. -5142 Jun 11 j 22:08 10°ML24'25 19.00589 AU minimum elong -5135 Jan 03 j 04:20 6°**∡**¹01'45 0°25'44 opposition -5142 Jun 13 j 03:29 10°M21'30 0°-3'-43 max. Earth dist. -5135 Jan 04 i 10:10 6° **₹**06'00 21.14120 AU direct -5142 Aug 27 j 18:27 8°M25'24 retrograde -5135 Apr 24 i 02:21 10°**х** 02'47 min. Earth dist. -5135 Jul 10 i 02:45 8°**∡**06'08 19.14494 AU conjunction -5142 Dec 10 i 22:53 12° ML18'10 0°-5'-11 opposition -5135 Jul 11 i 06:15 8°**∡**03'22 0°-29'-53 -5142 Dec 10 i 22:54 12°ML18'10 0°05'22 direct -5135 Sep 24 j 08:20 6°**х** 07'37 minimum elong behind sun begin -5142 Dec 10 j 16:33 12°ML17'17 -5142 Dec 11 j 05:15 12°M 19'04 -5134 Jan 07 j 09:39 9°**х** 57'59 0°-28'-31 behind sun end conjunction max. Earth dist. -5142 Dec 12 j 06:27 12°M22'43 21.02230 AU -5134 Jan 07 j 09:39 9°**∡**757'59 0°28'47 minimum elong -5141 Jan 31 j 06:05 15°ML -5134 Jan 08 j 14:22 10° **₹**02'03 21.14662 AU max. Earth dist. -5141 Mar 31 j 03:54 16°M20'11 -5134 Apr 28 j 08:43 13° ₹ 59'04 retrograde retrograde min. Earth dist. -5134 Jul 14 j 10:43 12° ₹02'14 19.14809 AU -5141 May 31 j 21:53 15°RM -5141 Jun 16 j 06:02 14° ML23'58 19.03828 AU -5134 Jul 15 j 12:10 11° **₹** 59'40 0°-33'-10 min. Earth dist. opposition -5141 Jun 17 j 12:13 14°M20'57 0°-7'-41 -5134 Sep 28 j 10:50 10° ₹ 03'55 opposition direct -5141 Sep 01 j 01:45 12°M24'56 direct -5141 Nov 22 j 09:43 15°M -5133 Jan 11 j 15:25 13° ₹754'22 0°-31'-26 conjunction -5133 Jan 11 j 15:25 13° ₹ 54'22 0°31'43 minimum elong -5141 Dec 15 j 03:53 16°M17'04 0°-8'-44 conjunction max. Earth dist. -5133 Jan 12 j 19:22 13° ₹ 58'19 21.14744 AU minimum elong -5141 Dec 15 j 03:53 16°M 17'04 0°08'57 retrograde -5133 May 02 j 17:43 17°**尽** 55'34 behind sun begin -5141 Dec 14 j 22:14 16°M16'16 opposition -5133 Jul 19 j 17:48 15° ₹ 56'11 0°-36'-19 behind sun end -5141 Dec 15 j 09:32 16°ML17'51 min. Earth dist. -5133 Jul 18 j 16:38 15° ₹ 58'43 19.14628 AU max. Earth dist. -5141 Dec 16 j 10:55 16° ML21'31 21.05228 AU direct -5133 Oct 02 j 16:23 14° ₹ 00'24 retrograde -5140 Apr 03 j 10:45 20°ML18'45 -5140 Jun 20 j 20:21 18°ML19'28 0°-11'-37 -5132 Jan 15 j 21:29 17° ₹751'02 0°-34'-12 opposition conjunction min. Earth dist. -5140 Jun 19 j 15:29 18°ML22'21 19.06610 AU -5132 Jan 15 j 21:29 17° ₹ 51'02 0°34'30 minimum elong -5140 Sep 04 i 07:13 16°M23'31 -5132 Jan 16 j 23:47 17° ₹ 54'46 21.14286 AU direct max. Earth dist. -5132 May 06 i 00:43 21° ₹ 52'25 retrograde -5140 Dec 18 i 08:48 20° ML15'05 0°-12'-14 -5132 Jul 22 j 23:21 19° ₹ 53'02 0°-39'-18 conjunction opposition -5140 Dec 18 j 08:48 20°ML15'05 -5132 Jul 22 j 00:39 19°**₹**755'19 19.13895 AU minimum elong 0°12'27 min. Earth dist. behind sun begin -5140 Dec 18 i 04:28 20° ML14'29 direct -5132 Oct 05 j 19:05 17° ₹ 57'12 behind sun end -5140 Dec 18 i 13:07 20° ML15'41 max. Earth dist. -5140 Dec 19 j 16:06 20° ML 19'34 21.07802 AU -5131 Jan 19 i 04:03 21° ₹ 48'07 0°-36'-49 conjunction retrograde -5139 Apr 07 j 19:42 24°M16'31 -5131 Jan 19 j 04:02 21°**✓** 48'07 0°37'07 minimum elong -5139 Jun 23 j 22:14 22°ML20'09 19.08977 AU -5131 Jan 20 j 05:01 21° ₹ 51'39 21.13276 AU min. Earth dist. max. Earth dist. retrograde -5131 May 10 j 09:44 25° ₹ 49'43 opposition -5139 Jun 25 j 03:55 22°ML17'10 0°-15'-28 direct -5139 Sep 08 j 13:26 20°M21'16 min. Earth dist. -5131 Jul 26 j 06:43 23° ₹ 52'32 19.12585 AU opposition -5131 Jul 27 j 04:49 23°**尽** 50'18 0°-42'-5 -5139 Dec 22 j 13:26 24°ML12'23 0°-15'-40 direct -5131 Oct 10 j 00:12 21° ₹ 54'22 conjunction -5139 Dec 22 j 13:26 24°Ml2'23 0°15'55 minimum elong -5139 Dec 22 j 12:25 24°Ml12'15 -5130 Jan 23 j 10:55 25° **₹** 45'39 0°-39'-16 behind sun begin conjunction -5139 Dec 22 j 14:28 24°M12'32 -5130 Jan 23 j 10:55 25° ₹ 45'39 behind sun end minimum elong 0°39'33 max. Earth dist. -5139 Dec 23 j 20:16 24°M 16'47 21.09964 AU max. Earth dist. -5130 Jan 24 j 09:51 25° ₹ 48'54 21.11659 AU retrograde -5138 Apr 12 j 01:56 28°M 13'37 retrograde -5130 May 14 j 17:12 29° ₹ 47'31 min. Earth dist. -5138 Jun 28 j 06:52 26°ML17'05 19.10952 AU opposition -5130 Jul 31 j 10:24 27° ₹ 48'02 0°-44'-41 opposition -5138 Jun 29 j 11:12 26° **™** 14'14 0°-19'-13 min. Earth dist. -5130 Jul 30 j 14:58 27°**х** 50′00 19.10665 AU

direct

-5130 Oct 14 j 03:45 25° ₹ 51'56

-5138 Sep 12 j 17:55 24°ML18'23

direct

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•	nical year style is used: The		•	/ /		, .	age 19
conjunction	-5129 Jan 27 j 18:26	-		direct	-5122 Nov 14 j 21:15		•
minimum elong	-5129 Jan 27 j 18:26	29° х 43'40		ancet	-5121 Jan 26 j 07:01	0°≈	
max. Earth dist.	-5129 Jan 28 j 15:41		21.09450 AU		5121 Juli 20 j 07.01	0 / 0 .	
man. Darvir alov.	-5129 Feb 01 j 13:38	0°ਰ	21.09.00110	conjunction	-5121 Mar 02 j 00:31	1°≈54'53	0°-51'-40
retrograde	-5129 May 19 j 02:20	3°₹45'50		minimum elong	-5121 Mar 02 j 00:31	1°≈54'53	0°51'56
opposition	-5129 Aug 04 j 15:37	1° පි 46'15	0°-47'-4	max. Earth dist.	-5121 Mar 02 j 06:09	1°≈55'42	20.75858 AU
min. Earth dist.	-5129 Aug 03 j 21:02	1°る48'08	19.08155 AU	retrograde	-5121 Jun 21 j 05:32	6° ≈ 01'10	
	-5129 Sep 28 j 11:44			opposition	-5121 Sep 05 j 14:12	4° ≈ 00'39	0°-57'-20
direct	-5129 Oct 18 j 08:43	29° х ⁴49'56		min. Earth dist.	-5121 Sep 05 j 09:41	4° ≈ 01'07	18.73111 AU
	-5129 Nov 07 j 01:37	0°ರ		direct	-5121 Nov 19 j 05:08	2° ≈ 02'00	
conjunction	-5128 Feb 01 j 02:16	3° ප 42'12	0°-43'-34	conjunction	-5120 Mar 05 j 13:29	6° ≈ 01'46	0°-51'-50
minimum elong	-5128 Feb 01 j 02:16	3°₹42'12	0°43'52	minimum elong	-5120 Mar 05 j 13:29	6° ≈ 01'46	0°52'06
max. Earth dist.	-5128 Feb 01 j 21:22	3°₹44'54	21.06657 AU	max. Earth dist.	-5120 Mar 05 j 17:03	6° ≈ 02'17	20.70273 AU
retrograde	-5128 May 22 j 09:43	7° る 44'42		retrograde	-5120 Jun 24 j 16:02	10° ≈ 08'48	
opposition	-5128 Aug 07 j 21:05	5° ರ 44'59	0°-49'-14	opposition	-5120 Sep 08 j 21:31	8° ≈ 08'12	0°-57'-23
min. Earth dist.	-5128 Aug 07 j 05:10	5° ප 46'37	19.05095 AU	min. Earth dist.	-5120 Sep 08 j 19:44	8° ≈ 08'24	18.67386 AU
direct	-5128 Oct 21 j 12:54	3° ප් 48'26		direct	-5120 Nov 22 j 11:27	6° ≈ 09'16	
conjunction	-5127 Feb 04 j 10:26	7° る 41'18	0°-45'-25	conjunction	-5119 Mar 10 j 03:10		0°-51'-44
minimum elong	-5127 Feb 04 j 10:26	7° る 41'18	0°45'43	minimum elong	•	10° ≈ 10′21	0°51'59
max. Earth dist.	-5127 Feb 05 j 03:55		21.03361 AU	max. Earth dist.	-5119 Mar 10 j 04:05		20.64415 AU
retrograde	-5127 May 26 j 19:18			retrograde	-5119 Jun 29 j 05:26		
min. Earth dist.	-5127 Aug 11 j 11:16		19.01561 AU	opposition	-5119 Sep 13 j 05:15		0°-57'-9
opposition	-5127 Aug 12 j 02:25	9° る 44'20	0°-51'-9	min. Earth dist.	-5119 Sep 13 j 04:55		18.61372 AU
direct	-5127 Oct 25 j 18:21	7° る 47'29		direct	-5119 Nov 26 j 20:22	10° ≈ 18′12	
conjunction	-5126 Feb 08 j 19:12			conjunction	-5118 Mar 14 j 18:02		0°-51'-22
minimum elong	-5126 Feb 08 j 19:12		0°47'20	minimum elong	-5118 Mar 14 j 18:02		0°51'36
max. Earth dist.	-5126 Feb 09 j 10:43		20.99606 AU	max. Earth dist.	,	14° ≈ 20′29	20.58234 AU
retrograde	-5126 May 31 j 02:48				-5118 Mar 26 j 02:51	15° ≈	
opposition	-5126 Aug 16 j 07:51			retrograde	-5118 Jul 03 j 17:30		00.561.26
min. Earth dist.	-5126 Aug 15 j 19:20		18.9/606 AU	opposition	-5118 Sep 17 j 13:35		0°-56'-36
direct	-5126 Oct 29 j 22:27	11° 5 47′15		min. Earth dist.	-5118 Sep 17 j 16:10		18.55029 AU
i 4 i	5125 E-L 12 : 04.20	1507/1127	0°-48'-27	J:4	3	15°R≈	
conjunction minimum elong	-5125 Feb 13 j 04:38 -5125 Feb 13 j 04:38			direct	-5118 Dec 01 j 04:12		
max. Earth dist.	-5125 Feb 13 j 18:22				-5117 Jan 04 j 21:04	13 🌤	
retrograde	-5125 Feb 13 j 18.22 -5125 Jun 04 j 13:17		20.93474 AU	conjunction	-5117 Mar 19 j 09:45	1000022147	0°-50'-43
opposition	-5125 Aug 20 j 13:21		0°-54'-16	minimum elong	-5117 Mar 19 j 09:45		0°50'57
min. Earth dist.	-5125 Aug 20 j 01:39			max. Earth dist.	-5117 Mar 19 j 05:09		
direct	-5125 Nov 03 j 04:51		16.75275 AC	retrograde	-5117 Jul 08 j 08:12		20.31737 AC
direct	-5125 NOV 05 J 04.51	13 047 31		opposition	-5117 Sep 21 j 22:29		0°-55'-44
conjunction	-5124 Feb 17 j 14:29	19°₹43'07	0°-49'-37	min. Earth dist.	-5117 Sep 22 j 02:43		
minimum elong	-5124 Feb 17 j 14:29		0°49'55	direct	-5117 Dec 05 j 14:39		10.10371710
max. Earth dist.	-5124 Feb 18 j 02:16						
retrograde	-5124 Jun 07 j 20:58			conjunction	-5116 Mar 23 j 02:13	22° ≈ 46'38	0°-49'-47
opposition	-5124 Aug 23 j 19:09		0°-55'-27	minimum elong	-5116 Mar 23 j 02:14		0°49'59
min. Earth dist.	-5124 Aug 23 j 09:59			max. Earth dist.	-5116 Mar 22 j 19:28	22° ≈ 45'40	20.44917 AU
direct	-5124 Nov 06 j 08:56			retrograde	-5116 Jul 11 j 21:20		
	·			opposition	-5116 Sep 25 j 08:05	24° ≈ 55'50	0°-54'-34
conjunction	-5123 Feb 21 j 01:04	23° ⋜ 45'43	0°-50'-33	min. Earth dist.	-5116 Sep 25 j 15:02	24°≈55'06	18.41410 AU
minimum elong	-5123 Feb 21 j 01:04	23° ⋜ 45'43	0°50'49	direct	-5116 Dec 09 j 00:08	22° ≈ 55'20	
max. Earth dist.	-5123 Feb 21 j 10:57	23° ₹ 47'08	20.86216 AU				
retrograde	-5123 Jun 12 j 08:26	27°る50'40		conjunction	-5115 Mar 27 j 19:32	27° ≈ 02'13	0°-48'-34
opposition	-5123 Aug 28 j 01:06		0°-56'-21	minimum elong	-5115 Mar 27 j 19:32	27° ≈ 02'13	0°48'46
min. Earth dist.	-5123 Aug 27 j 16:49	25° る 51'09	18.83742 AU	max. Earth dist.	-5115 Mar 27 j 09:29	27° ≈ 00'45	20.37847 AU
direct	-5123 Nov 10 j 16:13	23° る 52'15			-5115 May 22 j 19:58	0°) €	
				retrograde	-5115 Jul 16 j 12:58	1° ₩ 13'14	
conjunction	-5122 Feb 25 j 12:21	27° る 49'35	0°-51'-14		-5115 Sep 10 j 09:56	30°R ≈	
minimum elong	-5122 Feb 25 j 12:21	27° る 49'35	0°51'31	opposition	-5115 Sep 29 j 18:03	29° ≈ 12′03	0°-53'-5
max. Earth dist.	-5122 Feb 25 j 20:15	27° る 50'43	20.81164 AU	min. Earth dist.	-5115 Sep 30 j 02:41	29° ≈ 11′08	18.34232 AU
	-5122 Apr 06 j 11:46	0° ≈		direct	-5115 Dec 13 j 12:03	27° ≈ 11'05	
retrograde	-5122 Jun 16 j 17:12	1° ≈ 55'11			-5114 Mar 09 j 14:34	0°) €	
	-5122 Aug 30 j 04:45	30°Ŗ₹					
opposition	-5122 Sep 01 j 07:34			conjunction	-5114 Apr 01 j 13:49	1° ∺ 19'32	
min. Earth dist.	-5122 Sep 01 j 01:54	29° ප 55'19	18.78555 AU	minimum elong	-5114 Apr 01 j 13:49	1° ∺ 19'32	0°47'15

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5114 in astronomical counting style is the year 5115 BCE in historical counting style. -5114 Apr 01 i 01:59 1°**升**17'48 20.30573 AU max. Earth dist. -5106 May 07 j 17:23 6°**Υ**42'05 19.74104 AU max. Earth dist. -5114 Jul 21 j 03:24 5°\ 31'21 -5106 Aug 26 j 04:45 11°**Υ**'04'45 retrograde retrograde -5114 Oct 04 j 04:48 3°¥30'01 0°-51'-17 -5106 Nov 07 j 21:36 9°Υ02'40 0°-26'-49 opposition opposition -5114 Oct 04 j 15:55 -5106 Nov 08 j 20:37 9°**Υ**00'10 17.71004 AU min. Earth dist. 3°**¥**28'49 18.26886 AU min. Earth dist. -5105 Jan 22 j 06:09 -5114 Dec 17 j 23:21 6°Y58'08 direct 1°**H**28'34 direct 5°**)** 38'35 0°-45'-19 -5113 Apr 06 j 08:45 -5105 May 13 j 21:15 11° **Y**21'20 0° -22'-15 conjunction conjunction -5113 Apr 06 j 08:45 -5105 May 13 j 21:15 11° **Y**21'20 0° 22'14 minimum elong 5°**H**38'35 0°45'27 minimum elong -5113 Apr 05 j 17:43 -5105 May 12 j 16:03 11°**Υ**16'54 19.67928 AU max. Earth dist. 5°**升**36'22 20.23186 AU max. Earth dist. -5113 Jul 25 j 19:46 9°**⊁**51'15 retrograde retrograde -5105 Aug 31 j 00:28 15°**Υ**40'46 7°**)**49'43 0°-49'-12 opposition -5113 Oct 08 j 16:04 opposition -5105 Nov 12 j 15:44 13°**Υ**38'40 0°-22'-40 -5113 Oct 09 j 04:47 -5105 Nov 13 j 16:36 13°**Υ**35'57 17.64954 AU min. Earth dist. 7°**¥**48'21 18.19474 AU min. Earth dist. -5113 Dec 22 j 12:38 -5104 Jan 27 j 02:10 11°**Υ**33'49 direct 5°**)**(47'47 direct conjunction -5112 Apr 10 j 04:35 9°\\$59'26 0°-43'-17 conjunction -5104 May 17 j 23:18 15°**Υ**58'34 0°-18'-26 minimum elong -5112 Apr 10 j 04:35 9°**¥**59'26 0°43'25 minimum elong -5104 May 17 j 23:19 15°**Υ**58'34 0°18'23 max. Earth dist. -5112 Apr 09 j 12:20 9°**升**57'02 20.15757 AU max. Earth dist. -5104 May 16 j 17:39 15°**Υ**54'02 19.61987 AU retrograde -5112 Jul 29 j 11:44 14° **光** 12'55 retrograde -5104 Sep 03 j 22:55 20°**Υ**18'43 opposition -5112 Oct 12 j 04:09 12° **)** 11'15 0°-46'-49 opposition -5104 Nov 16 j 10:42 18°**Υ** 16'36 0°-18'-19 min. Earth dist. -5112 Oct 12 j 18:50 12° \(\) (09'40 18.12060 AU min. Earth dist. -5104 Nov 17 j 12:04 18° Υ 13'50 17.59129 AU direct -5112 Dec 26 j 01:43 10° ¥ 08'51 direct -5103 Jan 31 j 00:52 16° Υ 11'29 max. Earth dist. -5111 Apr 14 i 05:42 14° **)** 19'15 20.08381 AU max. Earth dist. -5103 May 21 j 18:04 20° Υ 32'46 19.56280 AU conjunction -5111 Apr 15 i 00:58 14° **★**22'07 0°-40'-59 conjunction -5103 May 23 i 01:52 20°**Υ**'37'39 0°-14'-27 minimum elong -5111 Apr 15 j 00:58 14° **¥** 22'07 0°41'05 minimum elong $-5103 \text{ May } 23 \text{ j } 01:52 \quad 20^{\circ} \Upsilon 37'39$ 0°14'23 -5111 Aug 03 j 05:03 18°¥ 36'29 -5103 May 22 j 22:59 20°**Υ**37'13 retrograde behind sun begin -5111 Oct 16 j 16:57 16° \(\)34'39 0°-44'-9 -5103 May 23 j 04:44 20° Υ 38'05 opposition behind sun end -5111 Oct 17 j 09:08 16° + 32'54 18.04736 AU -5103 Sep 08 j 19:58 24° Υ 58'28 min. Earth dist. retrograde -5111 Dec 30 j 16:07 14°\mathbf{3}1'49 -5103 Nov 21 j 06:41 22°**Υ**'56'19 0°-13'-50 direct opposition -5103 Nov 22 j 09:53 22°**Υ**53'21 17.53561 AU min. Earth dist. -5110 Apr 19 j 22:29 18° **)** 46'45 0°-38'-26 $-5102 \text{ Feb} \ 04 \text{ j } 22:48 \ 20^{\circ} \Upsilon 50'52$ conjunction direct -5110 Apr 19 j 22:29 18° **)** 46'45 0°38'32 -5102 May 26 j 20:43 25°**Υ**13'25 19.50849 AU minimum elong max. Earth dist. -5110 Apr 19 j 02:23 18°**)** 43'45 20.01109 AU max. Earth dist. -5110 Aug 07 j 22:53 23°**₭**01'58 -5102 May 28 j 05:00 25° Υ 18'24 0°-10'-23 retrograde conjunction -5110 Oct 21 j 06:30 21°**米**00'01 0°-41'-12 -5102 May 28 j 05:00 25°**Υ**18′24 opposition minimum elong 0°10'18 -5102 May 27 j 23:41 25°**Υ**17'36 -5110 Oct 22 j 00:15 20° ¥ 58'06 17.97542 AU min. Earth dist. behind sun begin -5109 Jan 04 j 07:20 18° ¥ 56'47 $-5102 \text{ May } 28 \text{ j } 10:19 \quad 25^{\circ} \Upsilon 19'12$ direct behind sun end retrograde -5102 Sep 13 j 19:37 29°**Υ**39'49 conjunction -5109 Apr 24 j 20:37 23° **)** € 13'23 0°-35'-39 opposition -5102 Nov 26 j 03:21 27°**Υ**37'37 0°-9'-13 minimum elong -5109 Apr 24 j 20:37 23°**升** 13'23 0°35'43 min. Earth dist. -5102 Nov 27 j 06:34 27°**Υ**34'38 17.48280 AU max. Earth dist. -5109 Apr 23 j 21:35 23°**米**09'56 19.94014 AU direct -5101 Feb 09 j 23:28 25°**Y**31'53 -5109 Aug 12 j 17:00 27° **€** 29'29 max. Earth dist. -5101 May 31 j 23:02 29°**Υ**55'27 19.45735 AU retrograde -5109 Oct 25 j 21:00 25° **★**27'27 0°-37'-58 opposition min. Earth dist. -5109 Oct 26 j 16:12 25° **€**25'22 17.90559 AU -5101 Jun 02 j 08:29 0°**8**00'38 0°-6'-13 conjunction -5108 Jan 08 j 22:53 23°**∺**23'50 -5101 Jun 02 j 08:28 0°**8**00'38 0°06'06 direct minimum elong -5101 Jun 02 j 02:03 29° γ′59'40 behind sun begin -5108 Apr 28 i 19:32 27° **)** 42'07 0°-32'-37 -5101 Jun 02 i 14:54 0°**8**01'36 conjunction behind sun end -5108 Apr 28 j 19:32 27° \(\frac{1}{2}\)42'07 0°32'40 -5101 Jun 02 j 04:16 minimum elong 0°8 -5108 Apr 27 j 20:06 27° ¥ 38'36 19.87136 AU max. Earth dist. retrograde -5101 Sep 18 i 17:56 4°**8**22'34 opposition -5108 Jun 07 i 22:12 $0^{\circ}\Upsilon$ -5101 Dec 01 j 01:02 2°**8**20'19 0°-4'-32 -5108 Aug 16 j 12:47 1°Y59'05 min. Earth dist. -5101 Dec 02 j 05:46 2°817'10 17.43365 AU retrograde -5108 Oct 28 j 08:50 30°R € direct -5100 Feb 14 j 22:34 0°814'17 -5108 Oct 29 j 12:20 29° **)** 57'01 0°-34'-30 max. Earth dist. -5100 Jun 05 j 02:21 4°**႘**38'55 19.41025 AU opposition -5108 Oct 30 j 08:41 29° ¥ 54'48 17.83797 AU min. Earth dist. direct -5107 Jan 12 j 16:28 27° ¥ 53'05 conjunction -5100 Jun 06 j 12:01 4°844'09 0°-1'-58 $0^{\circ}\Upsilon$ -5107 Mar 26 j 09:13 minimum elong -5100 Jun 06 j 12:01 4°**8**44'09 0°01'51 behind sun begin -5100 Jun 06 j 05:15 4°**8**43'08 -5107 May 03 j 19:15 2°\bar{\gamma}\13'02 0°-29'-22 -5100 Jun 06 j 18:47 4°**8**45'11 conjunction behind sun end -5107 May 03 j 19:15 2°\bar{\gamma}13'02 0°29'24 -5100 Sep 22 j 18:39 9°806'34 minimum elong retrograde -5107 May 02 j 17:04 2°**Y**09'04 19.80500 AU -5100 Nov 19 j 19:01 7°**8**43'24 max. Earth dist. asc. node 6°**Y**30'51 -5100 Dec 04 j 23:15 7°**8**04'14 0°00'12 retrograde -5107 Aug 21 j 07:31 opposition -5107 Nov 03 j 04:26 4°**Υ**28'45 0°-30'-46 min. Earth dist. -5100 Dec 06 j 03:25 7°**8**01'09 17.38869 AU opposition min. Earth dist. -5107 Nov 04 j 02:31 4°**Υ**26'21 17.77289 AU direct -5099 Feb 19 j 00:44 4°**8**57'56 direct -5106 Jan 17 j 09:58 2°**Y**24'30 max. Earth dist. -5099 Jun 10 j 06:14 9°**8**23'32 19.36759 AU -5106 May 08 j 20:00 6°Y46'07 0°-25'-54 -5099 Jun 11 j 15:57 9°**႘**28'48 0°02'24 conjunction conjunction -5106 May 08 j 20:01 6°Y46'07 0°25'54 -5099 Jun 11 j 15:58 9°**8**28'48 0°02'34 minimum elong minimum elong

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5099 in astronomical counting style is the year 5100 BCE in historical counting style. behind sun begin -5099 Jun 11 j 09:13 9°**8**27'46 conjunction -5092 Jul 15 j 18:11 13°**Д**01'39 0°30'27 -5099 Jun 11 j 22:42 9°829'50 -5092 Jul 15 j 18:11 13°**Д**01'39 0°30'42 behind sun end minimum elong -5099 Sep 27 j 17:18 13°851'35 -5092 Jul 14 j 14:19 12°**Д**57'13 19.24064 AU retrograde max. Earth dist. -5099 Dec 09 j 22:16 11°849'12 0°04'58 -5092 Oct 30 j 22:03 17°**Д**25'22 opposition retrograde -5099 Dec 11 j 03:36 11°845'59 17.34865 AU -5091 Jan 12 j 08:49 15°**Д**23'22 0°35'52 min. Earth dist. opposition -5091 Jan 13 j 08:22 15°**Ⅱ**20'49 17.24386 AU -5098 Feb 24 j 00:45 9°**8**42'40 min. Earth dist. direct max. Earth dist. -5098 Jun 15 j 10:03 14°**8**09'05 19.33028 AU -5091 Mar 30 j 05:02 13°**I**16'45 direct -5098 Jun 16 j 19:56 14°**8**14'24 0°06'40 -5091 Jul 20 j 21:14 17°**Ⅲ**50'44 0°33'51 conjunction conjunction -5091 Jul 20 j 21:14 17°**Д**50'44 0°34'08 minimum elong -5098 Jun 16 j 19:56 14°**8**14'24 0°06'51 minimum elong -5091 Jul 19 j 19:52 17°**Д**46'42 19.24754 AU behind sun begin -5098 Jun 16 j 13:40 14°**8**13'26 max. Earth dist. -5098 Jun 17 j 02:12 14°**8**15'21 -5091 Nov 04 j 22:53 22°**Ⅱ**14'18 behind sun end retrograde -5098 Jun 29 j 00:02 15°**႘** -5090 Jan 17 j 12:13 20° **Ⅱ**12'26 0°39'33 opposition retrograde -5098 Oct 02 j 18:38 18°837'30 min. Earth dist. -5090 Jan 18 j 10:41 20°**Ⅲ**10'00 17.25332 AU opposition -5098 Dec 14 j 21:58 16°\(\mathbf{2}\)35'04 0°09'42 direct -5090 Apr 04 j 10:32 18°**Ц**05'59 min. Earth dist. -5098 Dec 16 j 02:07 16°\(\arrow\) 17.31419 AU -5097 Jan 24 j 22:51 15°R₩ conjunction -5090 Jul 25 j 23:43 22°**Д**39'40 0°37'00 direct -5097 Mar 01 j 04:26 14°828'20 minimum elong -5090 Jul 25 j 23:43 22°**Д**39'40 0°37'16 -5097 Apr 04 j 22:34 15°8 max. Earth dist. -5090 Jul 24 j 22:56 22° **II** 35'43 19.25961 AU retrograde -5090 Nov 09 j 23:45 27°**Д**03'00 conjunction -5097 Jun 21 j 23:52 19°**8**00'48 0°10'52 opposition -5089 Jan 22 j 16:00 25°**Ⅱ**01'15 0°42'56 minimum elong -5097 Jun 21 j 23:52 19°**8**00'48 0°11'04 min. Earth dist. -5089 Jan 23 j 13:13 24°**Д**58'58 17.26796 AU behind sun begin -5097 Jun 21 j 18:52 19°\(200'02 direct -5089 Apr 09 i 15:20 22°**Ц**54'57 behind sun end -5097 Jun 22 i 04:53 19°**8**01'34 max. Earth dist. -5089 Jul 30 j 03:23 27°**Ⅲ**24'39 19.27666 AU max. Earth dist. -5097 Jun 20 j 15:11 18°**8**55'39 19.29876 AU -5097 Oct 07 j 17:43 23°824'09 -5089 Jul 31 j 01:38 27°**Ⅲ**28'11 0°39'54 retrograde conjunction opposition -5097 Dec 19 j 22:29 21°**8**21'43 0°14'23 -5089 Jul 31 j 01:38 27°**Ⅲ**28'11 minimum elong -5097 Dec 21 j 03:07 21°818'35 17.28591 AU -5089 Sep 11 j 05:46 0ಂತಾ min. Earth dist. -5096 Mar 05 j 05:51 19°**8**14'51 -5089 Nov 15 j 01:27 direct retrograde 1°951'13 -5096 Jun 24 j 19:03 23°**8**42'45 19.27381 AU -5088 Jan 23 j 18:36 30°R **Ⅱ** max. Earth dist. -5088 Jan 27 j 19:51 29°**Ⅲ**49'34 0°46'00 opposition -5096 Jun 26 j 03:46 23°847'54 0°15'01 -5088 Jan 28 j 15:15 29°**II**47'29 17.28727 AU conjunction min. Earth dist. -5096 Jun 26 j 03:45 23°**8**47'54 -5088 Apr 13 j 21:22 27°**II**43'27 0°15'14 direct minimum elong -5096 Jun 26 j 01:46 23°**8**47'36 -5088 Jun 27 j 19:26 behind sun begin 0.00 -5096 Jun 26 j 05:45 23°**8**48'13 max. Earth dist. -5088 Aug 03 j 05:55 2°512'43 19.29833 AU behind sun end -5096 Oct 11 j 19:04 28°**8**11'28 retrograde -5096 Dec 23 j 23:18 26°**8**09'02 0°18'59 -5088 Aug 04 j 03:00 2°516'04 0°42'31 opposition conjunction -5096 Dec 25 j 02:24 26°806'05 17.26434 AU min. Earth dist. minimum elong -5088 Aug 04 j 03:00 2°9516'04 0°42'47 direct -5095 Mar 10 j 10:37 24°**8**02'06 retrograde -5088 Nov 19 j 01:13 6°938'41 max. Earth dist. opposition -5087 Jan 31 j 23:36 4°537'07 0°48'45 min. Earth dist. -5087 Feb 01 j 17:58 4°535'09 17.31132 AU -5087 Apr 19 j 00:49 2°531'11 conjunction direct -5095 Jul 01 j 07:46 28°**8**35'39 max. Earth dist. -5087 Aug 08 j 08:59 7°500'04 19.32475 AU minimum elong 0°19'18 -5095 Jul 23 j 21:47 Π° retrograde -5095 Oct 16 j 18:46 2°**Ⅱ**59'20 -5087 Aug 09 j 03:43 7°503'03 0°44'49 conjunction -5095 Dec 29 i 00:59 0°**П**56'59 0°23'28 -5087 Aug 09 i 03:43 opposition minimum elong 7°9503'03 0°45'05 -5095 Dec 30 i 04:02 0°**Д**54'02 17.24949 AU -5087 Nov 24 i 03:01 11°525'11 min. Earth dist. retrograde -5094 Jan 20 i 14:57 30°R℃ opposition -5086 Feb 06 i 03:23 9°9523'41 0°51'08 direct -5094 Mar 15 j 13:20 28°850'03 min. Earth dist. -5086 Feb 06 i 19:15 9°521'59 17.33993 AU -5094 May 06 i 23:41 $0^{\circ}II$ direct -5086 Apr 24 j 07:06 7°917'57 max. Earth dist. -5094 Jul 05 j 04:48 3°**Ⅱ**19'04 19.24419 AU max. Earth dist. -5086 Aug 13 j 10:50 11°5046'14 19.35577 AU -5094 Jul 06 j 11:26 3°II23'55 0°23'02 -5086 Aug 14 j 03:31 11°5548'53 0°46'48 conjunction conjunction -5094 Jul 06 i 11:25 3°**II**23'55 0°23'17 minimum elong minimum elong -5086 Aug 14 j 03:30 11°5548'53 0°47'05 retrograde -5094 Oct 21 j 20:26 7°**Ⅱ**47'42 retrograde -5086 Nov 29 j 01:23 16°5010'30 opposition -5093 Jan 03 j 03:05 5°II45'26 0°27'48 opposition -5085 Feb 11 j 07:09 14°509'02 0°53'09 min. Earth dist. -5093 Jan 04 j 04:33 5°**I**42'40 17.24142 AU min. Earth dist. -5085 Feb 11 j 21:49 14°507'28 17.37343 AU -5093 Mar 20 j 19:05 3°**Ⅱ**38'34 direct -5085 Apr 29 j 10:18 12°503'30 direct 8°**Д**08'11 19.23934 AU -5093 Jul 10 j 10:56 max. Earth dist. -5085 Aug 19 j 02:28 16°533'23 0°48'27 conjunction -5093 Jul 11 j 15:04 8°**I**12'39 0°26'50 conjunction minimum elong -5085 Aug 19 j 02:28 16°533'23 0°48'43 minimum elong -5093 Jul 11 j 15:04 8°**Ⅱ**12'39 0°27'05 max. Earth dist. -5085 Aug 18 j 12:09 16°531'07 19.39182 AU retrograde -5093 Oct 26 j 20:38 12°**II**36'25 retrograde -5085 Dec 04 j 01:44 20°554'23 opposition -5092 Jan 08 j 05:47 10°**I**I34'18 0°31'57 opposition -5084 Feb 16 j 10:22 18°952'57 0°54'48 min. Earth dist. -5092 Jan 09 j 06:42 10°**Ⅲ**31'36 17.23966 AU min. Earth dist. -5084 Feb 16 j 21:52 18°951'43 17.41192 AU -5092 Mar 24 j 23:14 8°**Ц**27'33 -5084 May 03 j 16:32 16°547'40 direct direct

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Earth dist. -5076 Oct 31 j 21:55 -5083 May 08 j 19:03 21°530'19 direct 0° m -5075 Jan 13 j 15:35 retrograde 2° Mp 13'26 -5075 Mar 30 j 20:41 conjunction -5083 Aug 27 j 21:40 25°\$57'44 0°50'45 opposition 0° m 13'05 0° 52'55 -5083 Aug 27 j 21:40 25°557'44 0°51'01 minimum elong min. Earth dist. -5075 Mar 30 j 11:02 0° Mp 14'04 17.95422 AU -5083 Aug 27 j 12:26 25°556'16 19.47923 AU max. Earth dist. -5075 Apr 05 j 03:49 30°R€ -5083 Nov 17 j 18:26 -5075 Jun 15 j 22:32 28°**Ω**11'25 $0^{\circ}\Omega$ direct -5083 Dec 12 j 21:35 -5075 Aug 21 j 11:34 retrograde 0°**Ω**17'22 0°m -5082 Jan 07 j 11:41 30°Rூ opposition -5082 Feb 25 j 16:08 28°\$16'03 0°56'58 conjunction -5075 Oct 02 j 16:01 2° Mp 26'28 0°46'47 min. Earth dist. -5082 Feb 25 j 22:35 28°\$15'22 17.50451 AU minimum elong -5075 Oct 02 j 16:01 2° m 26'28 0°46'55 direct -5082 May 14 j 00:18 26°511'22 max. Earth dist. -5075 Oct 03 j 02:22 2° m 28'03 19.98955 AU -5082 Aug 22 j 20:01 0° Ω retrograde -5074 Jan 18 j 09:59 6° m 39'43 opposition -5074 Apr 04 j 18:46 4° M) 39′27 0°50'59 conjunction -5082 Sep 01 j 18:02 0°Ω37'26 0°51'24 min. Earth dist. -5074 Apr 04 j 06:46 4° 10 40'40 18.02495 AU minimum elong -5082 Sep 01 j 18:03 0°**Ω**37'26 0°51'38 direct -5074 Jun 20 j 19:17 2°m/38'11 max. Earth dist. -5082 Sep 01 j 12:14 0°Ω36'31 19.53075 AU retrograde -5082 Dec 17 j 17:26 4°Ω56'21 conjunction -5074 Oct 07 i 05:40 6° m 51'33 0°44'56 opposition -5081 Mar 02 j 18:33 2°Ω55'08 0°57'29 minimum elong -5074 Oct 07 i 05:40 6° m 51'33 0°45'04 min. Earth dist. -5081 Mar 02 j 23:21 2°**Ω**54'37 17.55857 AU max. Earth dist. -5074 Oct 07 j 19:04 6° m 53'37 20.06017 AU -5081 May 19 j 01:42 0°Ω50'50 retrograde -5073 Jan 23 j 02:10 11° m 03'56 direct -5073 Apr 09 j 15:58 9° m 03'44 0°48'46 opposition -5081 Sep 06 j 13:19 5°Ω15'27 0°51'42 -5073 Apr 09 j 02:12 9° 10 05'09 18.09536 AU conjunction min. Earth dist. -5081 Sep 06 j 13:19 5°**Ω**15'27 0°51'57 -5073 Jun 25 j 15:07 7° m 02'53 direct minimum elong -5081 Sep 06 j 09:31 5°**Ω**14'51 19.58732 AU max. Earth dist. -5073 Oct 11 j 18:12 11° Mp 14'32 0°42'50 -5081 Dec 22 j 15:24 9°**£**33'37 retrograde conjunction -5073 Oct 11 j 18:12 11° Mp 14'32 0°42'56 -5080 Mar 06 j 20:15 7°**Ω**32'32 0°57'37 opposition minimum elong -5073 Oct 12 j 08:28 11° Mp 16'43 20.13040 AU -5080 Mar 06 j 21:27 7°**Ω**32'24 17.61731 AU min. Earth dist. max. Earth dist. -5072 Jan 27 j 18:41 15° M 26'03 -5080 May 23 j 04:14 5°**Ω**28'38 direct retrograde -5072 Apr 13 j 12:16 13° M 25'53 0°46'17 opposition -5080 Sep 10 j 07:58 9°Ω51'46 0°51'41 -5072 Apr 12 j 20:38 13° m 27'29 18.16541 AU conjunction min. Earth dist. -5080 Sep 10 j 07:58 9° Ω 51'46 0°51'54 -5072 Jun 29 j 09:53 11° m 25'23 minimum elong direct -5080 Sep 10 j 07:43 9°**Ω**51'44 19.64811 AU max. Earth dist. retrograde -5080 Dec 26 j 10:39 14°**Ω**09'10 conjunction -5072 Oct 15 j 06:01 15° Mp 35'23 0°40'30 opposition -5079 Mar 11 j 21:30 12° Ω 08'14 0°57'23 minimum elong -5072 Oct 15 j 06:01 15° M 35'23 0°40'36 min. Earth dist. -5079 Mar 11 j 21:08 12° Ω 08'16 17.67993 AU max. Earth dist. -5072 Oct 15 j 23:15 15° Mp 38'00 20.20016 AU -5079 May 28 j 04:06 10°**Ω**04'47 retrograde -5071 Jan 31 j 09:27 19° Mp 46'00 direct -5071 Apr 18 j 07:35 17° Mp 45'53 0°43'34 opposition -5079 Sep 15 j 01:37 14° Ω 26'23 0°51'19 min. Earth dist. -5071 Apr 17 j 13:56 17° Mp 47'41 18.23488 AU conjunction -5079 Sep 15 j 01:37 $14^{\circ}\Omega 26'23$ $0^{\circ}51'32$ direct -5071 Jul 04 j 04:22 15° m 45'44 minimum elong -5079 Sep 15 j 02:59 14° Ω 26'36 19.71252 AU max. Earth dist. -5079 Sep 24 i 01:07 15°Ω -5071 Oct 19 i 16:50 19° m 54'03 0°37'58 conjunction -5079 Dec 31 i 07:42 $18^{\circ}\Omega$ 42'59 -5071 Oct 19 i 16:51 19° m 54'03 0°38'02 retrograde minimum elong -5078 Mar 16 j 22:14 $16^{\circ}\Omega 42'13$ $0^{\circ}56'47$ -5071 Oct 20 j 11:06 19° m 56'49 20.26952 AU opposition max. Earth dist. min. Earth dist. -5078 Mar 16 j 18:34 16° Ω42'36 17.74581 AU retrograde -5070 Feb 04 j 23:52 24° mp 03'50 -5078 May 04 j 05:49 15°RΩ min. Earth dist. -5070 Apr 22 j 06:50 22° Mp 05'42 18.30426 AU direct -5078 Jun 02 j 04:16 $14^{\circ}\Omega$ 39'12 -5070 Apr 23 j 02:10 22° mp 03'44 0°40'37 opposition -5078 Jun 30 j 10:40 $15^{\circ}\Omega$ direct -5070 Jul 08 j 21:02 20° mp 03'56 -5078 Sep 19 j 18:28 $18^{\circ}\Omega$ 59'13 0° 50'39 conjunction conjunction -5070 Oct 24 j 02:57 24° m 10'39 0°35'15 minimum elong -5078 Sep 19 j 18:28 $18^{\circ}\Omega$ 59'13 0° 50'50 minimum elong -5070 Oct 24 j 02:57 24° m 10'39 0°35'17 max. Earth dist. -5078 Sep 19 j 23:24 18° **Ω**59'59 19.77963 AU max. Earth dist. -5070 Oct 25 j 00:10 24° m 13'51 20.33875 AU retrograde -5077 Jan 05 j 02:17 23°**Ω**15'01 retrograde -5069 Feb 09 j 13:50 28° Mp 19'35 -5077 Mar 21 j 22:32 21° **Ω**14'23 0°55'50 -5069 Apr 27 j 19:43 26° m 19'32 0°37'29 opposition opposition -5077 Mar 21 j 17:15 21° **Ω**14'56 17.81396 AU min. Earth dist. -5069 Apr 26 j 22:08 26° Mp 21'43 18.37335 AU min. Earth dist. -5077 Jun 07 j 02:58 19°**Ω**11'51 direct -5069 Jul 13 j 13:41 24° m 20'06 direct -5077 Sep 24 j 10:27 23° Ω 30'13 0°49'39 conjunction conjunction -5069 Oct 28 j 12:20 28° m/25'15 0°32'21 minimum elong -5077 Sep 24 j 10:27 23° Ω 30'13 0°49'50 minimum elong -5069 Oct 28 j 12:20 28° m 25'15 0°32'23 max. Earth dist. -5077 Sep 24 j 16:38 23°Ω31'11 19.84871 AU max. Earth dist. -5069 Oct 29 j 10:31 28° m 28'35 20.40770 AU -5076 Jan 09 j 22:11 27°**Ω**45'11 -5069 Nov 24 j 11:40 0∘**ত** retrograde

retrograde

-5068 Feb 14 j 02:00

2°**£**33'24

-5076 Mar 25 j 21:51 $25^{\circ}\Omega$ 44'42 0° 54'32

opposition

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5068 in astronomical counting style is the year 5069 BCE in historical counting style. -5068 May 01 j 12:17 0°**2**33'25 0°34'10 opposition -5061 Jun 01 j 11:21 29° **2**27'26 0°07'39 opposition min. Earth dist. -5068 Apr 30 j 13:28 0°**2**35'43 18.44225 AU -5061 Aug 16 j 10:49 27°**♀**30'45 direct -5068 May 15 j 10:54 -5061 Nov 04 j 16:37 30°R, M) oom. -5068 Jul 17 j 03:48 28° M 34'20 direct -5068 Sep 14 j 00:23 -5061 Nov 29 j 21:15 1°M26'00 0°05'13 0ಂರ conjunction -5061 Nov 29 j 21:16 0°05'04 minimum elong 1°M26'00 2°**2**38'02 0°29'19 -5068 Oct 31 j 21:09 -5061 Nov 29 j 14:54 conjunction behind sun begin 1°M25'06 -5061 Nov 30 j 03:38 -5068 Oct 31 j 21:10 2°**₽**38'02 minimum elong 0°29'19 behind sun end 1°M26'54 -5068 Nov 01 j 21:57 1°M30'27 20.89693 AU max. Earth dist. 2°**2**41'44 20.47631 AU max. Earth dist. -5061 Dec 01 j 03:53 retrograde -5067 Feb 17 j 15:12 6°**£**45'25 retrograde -5060 Mar 18 j 15:30 5°M29'13 min. Earth dist. -5067 May 05 j 03:03 4°**£**48'03 18.51043 AU opposition -5060 Jun 04 j 22:04 3°**™**29'56 0°03'37 -5060 Jun 03 j 16:42 opposition -5067 May 06 j 04:04 4°**£**45'31 0°30'42 min. Earth dist. 3°M32'52 18.92008 AU -5067 Jul 21 j 18:32 -5060 Aug 19 j 18:05 direct 2°**2**46'51 direct 1°M33'26 conjunction -5067 Nov 05 j 05:07 6°**£**49'07 0°26'08 conjunction -5060 Dec 03 j 02:58 5°**™**27'47 0°01'33 minimum elong -5067 Nov 05 j 05:07 6°**₽**49'07 0°26'08 minimum elong -5060 Dec 03 j 02:56 5°M27'46 0°01'25 max. Earth dist. -5067 Nov 06 j 06:47 6°**£**52'56 20.54401 AU behind sun begin -5060 Dec 02 j 20:23 5°M26'51 retrograde -5066 Feb 22 j 01:59 10°**£**55'49 behind sun end -5060 Dec 03 j 09:30 5°M28'42 opposition -5066 May 10 j 19:16 8°**£**56'01 0°27'06 max. Earth dist. -5060 Dec 04 j 10:19 5°M32'19 20.94123 AU min. Earth dist. -5066 May 09 j 17:27 8°**2**58'36 18.57761 AU retrograde -5059 Mar 23 j 01:08 9°MJ30'31 direct -5066 Jul 26 j 06:16 6°**£**57'43 desc. node -5059 May 04 j 14:43 8°M49'38 min. Earth dist. -5059 Jun 08 i 01:41 7°ML34'15 18.96188 AU conjunction -5066 Nov 09 i 12:51 10° \(\Omega\) 58'38 0°22'50 opposition -5059 Jun 09 i 08:06 7°MJ31'13 0°00'-23 minimum elong -5066 Nov 09 i 12:51 10°**2**58'38 0°22'48 direct -5059 Aug 24 j 03:15 5°M34'52 max. Earth dist. -5066 Nov 10 j 16:42 11° **2**02'46 20.61038 AU retrograde -5065 Feb 26 j 14:06 15° **2**04'39 -5059 Dec 07 j 08:05 9°M28'21 0°-2'-10 conjunction -5065 May 14 j 05:39 13°**2**07'46 18.64299 AU -5059 Dec 07 j 08:05 9°M28′21 0°02'21 min. Earth dist. minimum elong -5065 May 15 j 09:23 13°**2**04'58 -5059 Dec 07 j 01:31 9°M27'26 opposition 0°23'22 behind sun begin -5065 Jul 30 j 19:06 11° **2**07'03 -5059 Dec 07 j 14:39 9°M29'17 direct behind sun end max. Earth dist. -5059 Dec 08 j 15:06 9°M32'50 20.98063 AU -5065 Nov 13 j 19:57 15°**Ω**06'42 0°19'26 -5058 Mar 27 j 08:38 13°M 30'41 conjunction retrograde -5065 Nov 13 j 19:58 15°**Ω**06'42 0°19'23 -5058 Jun 13 j 17:38 11°M 31'21 minimum elong opposition 0°-4'-22 -5065 Nov 15 j 00:15 15°**Ω**10'53 20.67459 AU max. Earth dist. min. Earth dist. -5058 Jun 12 j 12:16 11°M 34'17 18.99905 AU -5058 Aug 28 j 09:09 -5064 Mar 02 j 00:05 19°**♀**12'06 9°M35'07 retrograde direct -5064 May 18 j 22:59 17°**♀**12'32 0°19'32 opposition -5064 May 17 j 19:07 17°**2**15'20 18.70599 AU -5058 Dec 11 j 13:16 13°ML27'50 0°-5'-45 min. Earth dist. conjunction -5064 Aug 03 j 05:03 15°**♀**14'58 -5058 Dec 11 j 13:16 13°M27'50 direct minimum elong 0°05'57 behind sun begin -5058 Dec 11 j 07:00 13°M26'58 conjunction -5064 Nov 17 j 02:45 19°**£**13'25 0°15'57 behind sun end -5058 Dec 11 j 19:32 13°M28'43 minimum elong -5064 Nov 17 j 02:45 19°**£**13'25 0°15'53 max. Earth dist. -5058 Dec 12 j 20:57 13°ML32'24 21.01562 AU behind sun begin -5064 Nov 17 j 01:18 19°**♀**13'13 -5057 Jan 07 j 21:42 15° M⋅ behind sun end -5064 Nov 17 j 04:11 19°**2**13'38 -5057 Mar 31 j 17:32 17°M29'46 retrograde max. Earth dist. -5064 Nov 18 j 08:40 19°**£**17'49 20.73606 AU -5057 Jun 16 j 19:53 15°ML33'25 19.03191 AU min. Earth dist. -5063 Mar 06 j 11:12 23°**♀**18'13 -5057 Jun 18 j 02:08 15°ML30'24 0°-8'-19 retrograde opposition -5063 May 22 j 06:16 21°**2**21'43 18.76576 AU -5057 Jun 30 j 21:46 15°RM min. Earth dist. opposition -5063 May 23 j 11:44 21° **2**18'46 0°15'38 direct -5057 Sep 01 i 17:09 13°ML34'15 direct -5063 Aug 07 j 16:11 19°**£**21'32 -5057 Oct 30 j 23:24 15° M -5063 Nov 21 j 09:09 23°**2**18'51 0°12'24 -5057 Dec 15 j 18:07 17° ML 26'20 0°-9'-17 conjunction conjunction minimum elong -5063 Nov 21 i 09:09 23°**£**18'51 0°12'18 -5057 Dec 15 i 18:07 17° ML 26'20 0°09'30 minimum elong behind sun begin -5063 Nov 21 j 04:44 23°**△**18'13 behind sun begin -5057 Dec 15 j 12:37 17° M25'34 behind sun end -5063 Nov 21 j 13:34 23°**△**19'29 behind sun end -5057 Dec 15 j 23:37 17° M27'06 max. Earth dist. -5063 Nov 22 j 15:07 23° **2**23'14 20.79397 AU max. Earth dist. -5057 Dec 17 j 01:20 17°ML30'49 21.04638 AU -5062 Mar 10 j 20:37 27°**♀**23'06 retrograde retrograde -5056 Apr 04 j 00:18 21°M27'57 opposition -5062 May 27 j 23:58 25° **2**23'43 0°11'39 min. Earth dist. -5056 Jun 20 j 05:15 19°MJ31'27 19.06082 AU -5062 May 26 j 18:55 25°**£**26'38 -5056 Jun 21 j 10:20 19°M28'33 0°-12'-13 min. Earth dist. 18.82182 AU opposition direct -5062 Aug 12 j 00:50 23°**♀**26'47 direct -5056 Sep 04 j 21:44 17° ML32'29 -5062 Nov 25 j 15:23 27°**2**23'02 0°08'49 -5056 Dec 18 j 22:50 21°M24'01 0°-12'-46 conjunction conjunction -5062 Nov 25 j 15:23 27°**Ω**23'02 -5056 Dec 18 j 22:50 21°M24'01 0°13'00 minimum elong 0°08'43 minimum elong -5056 Dec 18 j 18:48 21° ML 23'27 behind sun begin -5062 Nov 25 j 09:42 27°**Ω**22'14 behind sun begin behind sun end -5062 Nov 25 j 21:05 27°**£**23'51 behind sun end -5056 Dec 19 j 02:52 21°M24'34 max. Earth dist. -5062 Nov 26 j 22:26 27°**2**27'34 20.84786 AU max. Earth dist. -5056 Dec 20 j 06:38 21°M28'34 21.07341 AU -5061 Jan 13 j 08:28 0° M retrograde -5055 Apr 08 j 08:45 25°M25'23 retrograde -5061 Mar 15 j 07:02 1°M26'45 min. Earth dist. -5055 Jun 24 j 11:54 23°ML28'57 19.08597 AU -5061 May 18 j 17:32 30°R € -5055 Jun 25 j 17:53 23°M25'57 0°-16'-2 opposition min. Earth dist. -5061 May 31 j 05:05 29°**2**30'28 18.87336 AU -5055 Sep 09 j 04:29 21°M29'59 direct

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5055 in astronomical counting style is the year 5056 BCE in historical counting style. -5055 Dec 23 i 03:33 25°M21'04 0°-16'-11 conjunction -5046 Jan 24 i 01:07 26° ₹ 55'20 0°-39'-31 conjunction -5055 Dec 23 j 03:33 25°M21'04 0°16'24 minimum elong -5046 Jan 24 j 01:07 26° ₹ 55'19 0°39'49 minimum elong -5055 Dec 24 j 10:42 25°ML25'31 21.09667 AU max. Earth dist. -5046 Jan 25 j 00:00 26° ₹758'34 21.12122 AU max. Earth dist. -5054 Apr 12 j 15:35 29°M22'16 -5046 Mar 26 j 17:49 0°궁 retrograde -5054 Jun 28 j 20:27 27°M25'42 19.10747 AU -5046 May 15 j 07:02 0°る57'08 min. Earth dist. retrograde -5054 Jun 30 j 01:05 27°M22'50 -5046 Jul 05 j 00:13 opposition 0°-19'-46 30°₽**⋌** -5046 Jul 31 j 04:57 28°**₹**'59'39 19.11134 AU direct -5054 Sep 13 j 08:15 25°M26'56 min. Earth dist. -5046 Aug 01 j 00:25 opposition 28°**∡** 57'41 0°-44'-57 -5054 Dec 27 j 08:27 29°M 17'42 0°-19'-31 27°**х** 01'36 conjunction direct -5046 Oct 14 j 17:13 -5054 Dec 27 j 08:27 29°M17'42 -5045 Jan 12 j 13:40 minimum elong 0°19'46 0°정 -5054 Dec 28 j 15:46 29° ML22'10 21.11631 AU max. Earth dist. -5053 Jan 08 j 18:17 -5045 Jan 28 j 08:30 0°る53'15 0°-41'-44 0°**∡**7 conjunction -5053 Apr 17 j 00:00 -5045 Jan 28 j 08:30 retrograde 3°**х** 18'47 minimum elong 0°る53'15 0°42'01 -5045 Jan 29 j 06:00 min. Earth dist. -5053 Jul 03 j 02:31 1°**尽**22'18 19.12509 AU max. Earth dist. 0°る56'18 21.09938 AU opposition -5053 Jul 04 j 07:43 1°**∡**19'23 0°-23'-24 retrograde -5045 May 19 j 16:35 4°**る**55'19 -5053 Aug 09 j 15:10 30°RM min. Earth dist. -5045 Aug 04 j 10:54 2°る57'39 19.08670 AU direct -5053 Sep 17 j 13:40 29°M23'34 opposition -5045 Aug 05 j 05:39 2°る55'44 0°-47'-17 -5053 Oct 25 j 11:39 direct -5045 Oct 18 j 23:29 0°**る**59'26 conjunction -5053 Dec 31 j 13:17 3°**₹**14'07 0°-22'-46 conjunction -5044 Feb 01 j 16:03 4°る51'35 0°-43'-45 minimum elong -5053 Dec 31 j 13:16 3°**х** 14'07 0°23'01 minimum elong -5044 Feb 01 j 16:03 4°**る**51'35 0°44'03 max. Earth dist. -5052 Jan 01 i 19:36 3°**∡**18'25 21.13185 AU max. Earth dist. -5044 Feb 02 i 11:24 4°る54'19 21.07213 AU retrograde -5052 Apr 20 i 06:58 7°**∡**15′08 retrograde -5044 May 22 j 23:07 8°**궁**53'57 min. Earth dist. -5052 Jul 06 i 10:37 5°**∡**18'32 19.13858 AU opposition -5044 Aug 08 i 10:58 6°る54'14 0°-49'-24 -5052 Jul 07 i 14:07 5°**х** 15′46 0°-26'-56 min. Earth dist. -5044 Aug 07 j 18:51 6°る55'52 19.05706 AU opposition -5052 Sep 20 j 17:02 3°**₹**20'02 direct -5044 Oct 22 j 02:34 4°る57'40 direct -5051 Jan 03 j 18:28 7°**₹**10'28 0°-25'-54 -5043 Feb 05 j 00:12 8° ට 50'23 0°-45'-33 conjunction conjunction -5051 Jan 03 j 18:28 -5043 Feb 05 j 00:12 8°る50'23 0°45'50 7° **1**0'28 0°26'10 minimum elong minimum elong -5043 Feb 05 j 18:11 -5051 Jan 05 j 00:37 7°**҂**14'45 21.14327 AU 8°る52'56 21.04037 AU max. Earth dist. max. Earth dist. -5051 Apr 24 j 15:46 11°**尽** 11'30 -5043 May 27 j 08:34 12°₹53'07 retrograde retrograde -5051 Jul 11 j 20:11 -5043 Aug 12 j 16:08 10°⋜53'15 0°-51'-17 opposition 9°**∡**12'10 0°-30'-20 opposition -5043 Aug 12 j 00:41 10°₹54′50 19.02315 AU min. Earth dist. -5051 Jul 10 j 16:28 9°**∡**14'57 19.14768 AU min. Earth dist. -5043 Oct 26 j 08:47 8°る56'25 -5051 Sep 24 j 21:38 7°**∡**16′29 direct direct -5050 Jan 07 j 23:45 11° ₹ 06'54 0°-28'-55 -5042 Feb 09 j 08:47 12°**⋜**49'49 0°-47'-8 conjunction conjunction -5050 Jan 07 j 23:45 11°**尽** 06'54 0°29'11 -5042 Feb 09 j 08:47 12°정49'49 0°47'26 minimum elong minimum elong max. Earth dist. -5050 Jan 09 j 04:33 11° ₹ 10'59 21.14995 AU max. Earth dist. -5042 Feb 10 j 00:39 12°る52'04 21.00440 AU retrograde -5050 Apr 28 j 22:43 15°**尽** 08'01 retrograde -5042 May 31 j 16:04 16°₹52'58 min. Earth dist. -5050 Jul 15 j 00:38 13°**尽**11'17 19.15188 AU opposition -5042 Aug 16 j 21:35 14°궁52'58 0°-52'-55 opposition -5050 Jul 16 j 02:13 13°**尽** 08'43 0°-33'-36 min. Earth dist. -5042 Aug 16 j 08:44 14°중54'17 18.98531 AU -5050 Sep 29 j 01:01 11° ₹ 13'03 direct -5042 Oct 30 j 12:32 12°₹55'51 direct -5049 Jan 12 j 05:40 15° ₹ 03'33 0°-31'-48 -5041 Feb 13 j 18:04 16°ਰ50'02 0°-48'-30 conjunction conjunction -5049 Jan 12 j 05:39 15° **₹** 03'33 0°32'05 -5041 Feb 13 j 18:04 16° ₹ 50'02 0° 48'47 minimum elong minimum elong -5049 Jan 13 j 09:43 15° ₹07'32 21.15156 AU -5041 Feb 14 j 08:21 16°る52'03 20.96485 AU max. Earth dist. max. Earth dist. -5049 May 03 j 08:18 19° **₹**04'47 -5041 Jun 05 j 01:54 20°**ප**53'39 retrograde retrograde -5049 Jul 19 i 06:31 17° ₹08'02 19.15067 AU -5041 Aug 21 i 02:55 18°る53'32 0°-54'-19 min. Earth dist. opposition -5049 Jul 20 j 07:45 17° ₹05'30 -5041 Aug 20 j 14:46 18°る54'47 18.94401 AU opposition 0°-36'-43 min. Earth dist. -5049 Oct 03 j 05:41 15° ₹09'48 direct direct -5041 Nov 03 j 18:26 16°る56'07 -5048 Jan 16 j 11:46 19° ₹ 00'29 0°-34'-33 -5040 Feb 18 i 03:51 20°る51'12 0°-49'-38 conjunction conjunction -5048 Jan 16 j 11:46 19° ₹ 00'29 0°34'50 -5040 Feb 18 j 03:51 20°る51'12 0°49'54 minimum elong minimum elong -5048 Jan 17 j 13:56 19° ₹04'12 21.14741 AU -5040 Feb 18 j 15:59 20°る52'55 20.92190 AU max. Earth dist. max. Earth dist. retrograde -5048 May 06 j 14:47 23° ₹01'53 retrograde -5040 Jun 08 j 10:30 24°る55'21 opposition -5048 Jul 23 j 13:29 21°**√**02'35 0°-39'-39 opposition -5040 Aug 24 j 08:44 22°궁55'08 0°-55'-27 min. Earth dist. -5048 Jul 22 j 14:44 21°**尽** 04'52 19.14358 AU min. Earth dist. -5040 Aug 23 j 23:08 22°**궁**56'08 18.89953 AU -5048 Oct 06 j 08:51 19° ₹06'49 direct -5040 Nov 06 j 22:58 20°る57'28 direct -5047 Jan 19 j 18:13 22° ₹ 57'44 0°-37'-7 -5039 Feb 21 j 14:15 24°る53'30 0°-50'-32 conjunction conjunction -5047 Jan 19 j 18:13 22°**₹** 57'44 0°37'24 -5039 Feb 21 j 14:15 24° 중53'30 0°50'49 minimum elong minimum elong max. Earth dist. -5047 Jan 20 j 19:16 23° ₹ 01'17 21.13739 AU max. Earth dist. -5039 Feb 22 j 00:41 24°る54'59 20.87603 AU

retrograde

opposition

direct

min. Earth dist.

-5039 Jun 12 j 21:19 28° 중58'16

-5039 Nov 11 j 05:17 25°**ჳ**00'01

-5039 Aug 28 j 14:43 26°る57'58

-5039 Aug 28 j 05:56 26°る58'52 18.85209 AU

0°-56'-19

retrograde

opposition

direct

min. Earth dist.

-5047 May 11 j 00:46 26° ₹ 59'20

-5047 Oct 10 j 14:20 23° ₹04'04

-5047 Jul 27 j 18:59 24° **₹** 59'58 0°-42'-24

-5047 Jul 26 j 20:48 25°**尽**02'13 19.13045 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5038 in astronomical counting style is the year 5039 BCE in historical counting style. -5038 Feb 26 j 01:33 28° ₹557'08 0°-51'-11 opposition -5031 Sep 30 i 07:06 0°**)** 18'01 0°-52'-42 conjunction -5038 Feb 26 j 01:33 28°る57'08 0°51'26 min. Earth dist. -5031 Sep 30 j 15:39 0°**升**17'06 18.35659 AU minimum elong max. Earth dist. -5038 Feb 26 j 09:44 28°る58'19 20.82706 AU -5031 Oct 07 j 09:15 30°R≈ -5038 Mar 16 j 13:57 -5031 Dec 14 j 01:40 28°≈17'07 direct 0°≈≈ -5030 Feb 17 j 03:06 -5038 Jun 17 j 07:03 retrograde 3°≈02'33 0°**∀** -5038 Sep 01 j 21:03 opposition 1°≈02'12 0°-56'-54 2°\ 25'18 0°-46'-44 -5038 Sep 01 j 15:05 -5030 Apr 02 j 02:18 min. Earth dist. 1°≈02'49 18.80159 AU conjunction minimum elong -5030 Apr 02 j 02:18 -5038 Sep 28 j 03:47 30°Ŗる 2°**H**25'18 0°46'53 -5030 Apr 01 j 14:37 direct -5038 Nov 15 j 10:35 29°**る**03'58 max. Earth dist. 2°**∺**23'35 20.32007 AU -5030 Jul 21 j 15:20 -5037 Jan 01 j 16:05 0°≈ retrograde 6°\ 36'54 opposition -5030 Oct 04 j 17:35 4° **★**35'36 0°-50'-53 -5037 Mar 02 j 13:42 -5030 Oct 05 j 04:39 conjunction 3°≈02'16 0°-51'-35 min. Earth dist. 4°**¥**34'26 18.28337 AU -5037 Mar 02 j 13:42 -5030 Dec 18 j 12:33 minimum elong 3°≈02'16 0°51'51 direct 2°**)** 34'14 max. Earth dist. -5037 Mar 02 j 19:44 3°**≈**03'08 20.77513 AU retrograde -5037 Jun 21 j 19:12 7°≈08'23 conjunction -5029 Apr 06 j 21:01 6°**)** 43′59 0°-44'-56 opposition -5037 Sep 06 j 03:47 5°**≈**07'58 0°-57'-13 minimum elong -5029 Apr 06 j 21:01 6°**)** 43′59 0°45'05 min. Earth dist. -5037 Sep 05 j 22:58 5°**≈**08'28 18.74799 AU max. Earth dist. -5029 Apr 06 j 06:23 6°**升**41'50 20.24667 AU direct -5037 Nov 19 j 18:08 3°≈09'28 retrograde -5029 Jul 26 j 07:48 10°**)** 56′26 opposition -5029 Oct 09 j 04:45 8°**)** 54'57 0°-48'-46 conjunction -5036 Mar 06 j 02:31 7°≈09'01 0°-51'-43 min. Earth dist. -5029 Oct 09 j 17:06 8°**升**53'38 18.20994 AU minimum elong -5036 Mar 06 j 02:31 7°**≈**09'01 0°51'58 direct -5029 Dec 23 j 01:46 6°¥53'06 max. Earth dist. -5036 Mar 06 i 06:12 7°≈09'33 20.71979 AU retrograde -5036 Jun 25 i 05:49 11°≈15'53 conjunction -5028 Apr 10 j 16:28 11°**)** €04'28 0°-42'-53 opposition -5036 Sep 09 j 11:06 9°≈15'25 0°-57'-13 minimum elong -5028 Apr 10 j 16:28 11°**¥** 04'28 0°43'00 min. Earth dist. -5036 Sep 09 j 09:16 9°**≈**15'36 18.69095 AU max. Earth dist. -5028 Apr 10 j 00:34 11°**)** €02'07 20.17322 AU -5036 Nov 23 j 00:23 7°≈16'36 retrograde -5028 Jul 29 j 23:29 15°**)** 17'45 direct -5028 Oct 12 j 16:42 13° ¥ 16'08 0°-46'-22 opposition -5035 Mar 10 j 16:23 11°≈17'28 0°-51'-35 -5028 Oct 13 j 07:05 13° ** 14'35 18.13677 AU conjunction min. Earth dist. -5035 Mar 10 j 16:23 11°≈17'28 0°51'49 -5028 Dec 26 j 14:00 11° **∺** 13'50 direct minimum elong -5035 Mar 10 j 17:24 11°≈17'37 20.66110 AU max. Earth dist. -5035 May 29 j 01:05 15°≈ -5027 Apr 15 j 12:46 15° ¥26'49 0°-40'-34 conjunction -5035 Jun 29 j 19:18 15°≈25'06 -5027 Apr 15 j 12:46 15° ¥ 26'49 0°40'41 minimum elong retrograde -5035 Jul 31 j 18:38 15°R≈ -5027 Apr 14 j 17:57 15° **∺**24'02 20.10056 AU max. Earth dist. -5035 Sep 13 j 18:43 13°≈24'33 0°-56'-56 -5027 Aug 03 j 17:12 19°**₭**40'57 opposition retrograde -5027 Oct 17 j 05:13 17° ¥39'12 0°-43'-41 -5035 Sep 13 j 18:22 13°≈24'35 18.63042 AU min. Earth dist. opposition -5035 Nov 27 j 09:38 11°≈25'23 -5027 Oct 17 j 20:54 17° ¥37'31 18.06473 AU direct min. Earth dist. -5034 Mar 07 j 07:33 15°≈ -5027 Dec 31 j 04:47 15°**¥** 36'28 direct -5026 Apr 20 j 10:06 19°**米** 51'07 0°-38'-1 conjunction -5034 Mar 15 j 07:13 15°≈27'39 0°-51'-10 conjunction minimum elong -5034 Mar 15 j 07:13 15°≈27'39 0°51'24 minimum elong -5026 Apr 20 j 10:06 19°**米**51'07 0°38'05 max. Earth dist. -5034 Mar 15 j 05:38 15°≈27'25 20.59866 AU max. Earth dist. -5026 Apr 19 j 14:21 19°**)** 48'11 20.02909 AU retrograde -5034 Jul 04 j 06:51 19°≈36'03 -5026 Aug 08 j 10:23 24°₩06'06 retrograde -5034 Sep 18 j 03:07 17°≈35'24 0°-56'-20 -5026 Oct 21 j 18:44 22° **)** 04'16 0°-40'-43 opposition opposition min. Earth dist. -5034 Sep 18 j 05:50 17°≈35'07 18.56619 AU min. Earth dist. -5034 Dec 01 j 17:28 15°≈35'51 -5025 Jan 04 j 18:39 20°**米**01'09 direct direct -5025 Apr 24 j 09:21 24° ** 14'04 19.95930 AU max. Earth dist. -5033 Mar 19 i 22:46 19°≈39'32 0°-50'-28 conjunction -5033 Mar 19 j 22:46 19°≈39'32 0°50'40 -5025 Apr 25 i 07:57 24° ¥ 17'27 0°-35'-12 minimum elong conjunction -5025 Apr 25 i 07:58 24° **)** 17'27 max. Earth dist. -5033 Mar 19 i 18:11 19°≈38'52 20.53282 AU minimum elong 0°35'16 retrograde -5033 Jul 08 j 21:08 23°≈48'43 retrograde -5025 Aug 13 i 05:16 28° ¥ 33'19 -5033 Sep 22 j 11:50 21°≈47'55 0°-55'-26 opposition -5025 Oct 26 j 09:00 26° ¥31'24 0°-37'-28 opposition min. Earth dist. -5033 Sep 22 j 16:05 21°≈47'29 18.49873 AU min. Earth dist. -5025 Oct 27 j 03:45 26° \(29'22 \) 17.92521 AU direct -5033 Dec 06 j 04:15 19°≈47'57 direct -5024 Jan 09 j 11:26 24° **€** 27'55 max. Earth dist. -5024 Apr 28 j 07:42 28° \(\frac{1}{42}\) 19.89136 AU conjunction -5032 Mar 23 j 15:10 23°≈53'06 0°-49'-30 minimum elong -5032 Mar 23 j 15:10 23°≈53'06 0°49'42 conjunction -5024 Apr 29 j 06:53 28° ¥45'54 0°-32'-10 -5032 Mar 23 j 08:19 23°≈52'06 20.46389 AU max. Earth dist. minimum elong -5024 Apr 29 j 06:53 28° \(\frac{1}{45} \) 45'54 0°32'13 -5024 May 20 j 01:57 $0^{\circ}\Upsilon$ -5032 Jul 12 j 09:55 28°≈03'05 retrograde -5032 Sep 25 j 21:15 26°≈02'08 0°-54'-13 retrograde -5024 Aug 16 j 23:38 3°Y02'36 opposition -5032 Sep 26 j 04:19 26°≈01'23 -5024 Oct 30 j 00:07 1°\bar{\gamma}00'40 0°-33'-59 min. Earth dist. 18.42857 AU opposition -5032 Dec 09 j 13:43 24°≈01'42 -5024 Oct 30 j 20:21 0°**Υ**58'28 17.85818 AU direct min. Earth dist. -5024 Nov 23 j 09:18 30°**₹** conjunction -5031 Mar 28 j 08:13 28°≈08'20 0°-48'-15 direct -5023 Jan 13 j 03:34 28°**)** 56'51 minimum elong -5031 Mar 28 j 08:13 28°≈08'20 0°48'26 -5023 Mar 04 j 01:43 $0^{\circ}\Upsilon$ max. Earth dist. -5031 Mar 27 j 22:24 28°≈06'54 20.39282 AU max. Earth dist. -5023 May 03 j 04:22 3°**Y**12'33 19.82526 AU -5031 Apr 30 j 06:56 0°**)**€

retrograde

-5031 Jul 17 j 01:06

2°**)** 19'09

conjunction

-5023 May 04 j 06:29 3°Υ16'29 0°-28'-54

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5023 in astronomical counting style is the year 5024 BCE in historical counting style. 3°Y16'29 0°28'55 -5023 May 04 i 06:29 max. Earth dist. -5016 Jun 05 i 12:09 5°837'36 19.42198 AU minimum elong 10°**8**04'54 -5023 Aug 21 j 19:32 7°**Y**34′02 -5016 Sep 23 j 03:27 retrograde retrograde opposition -5023 Nov 03 j 16:11 5°**Υ**'32'03 0°-30'-15 -5016 Oct 17 j 19:49 9°848'09 asc. node -5023 Nov 04 j 14:07 5°**Y**29'40 17.79301 AU -5016 Dec 05 j 09:14 8°802'31 0°00'38 min. Earth dist. opposition -5022 Jan 17 j 22:15 3°Y27'55 -5016 Dec 06 j 13:30 7°**8**59'26 17.40007 AU direct min. Earth dist. -5015 Feb 19 j 11:14 -5022 May 08 j 04:24 7°**Υ**45'09 max. Earth dist. 19.76081 AU direct 5°**8**56'11 -5015 Jun 10 j 15:36 10°**8**21'25 19.37873 AU max. Earth dist. -5022 May 09 j 07:05 7°**Υ**49'11 conjunction 0°-25'-26 -5022 May 09 j 07:05 7°**Υ**49'12 0°25'26 -5015 Jun 12 j 01:23 10°**8**26'41 minimum elong conjunction 0°02'47 -5015 Jun 12 j 01:22 10°**8**26'41 retrograde -5022 Aug 26 j 15:30 12°**Y**07'32 minimum elong 0°02'56 -5015 Jun 11 j 18:37 10°**8**25'40 opposition -5022 Nov 08 j 09:12 10°**Υ**05'31 0°-26'-17 behind sun begin min. Earth dist. -5022 Nov 09 j 08:20 10°**Υ**03'00 17.72936 AU -5015 Jun 12 j 08:06 10°**8**27'43 behind sun end -5021 Jan 22 j 17:31 -5015 Sep 28 j 02:14 14°849'11 direct 8°**Y**01′04 retrograde -5015 Dec 10 j 08:04 12°846'46 max. Earth dist. -5021 May 13 j 02:44 12°**Υ**19'25 19.69801 AU opposition 0°05'21 min. Earth dist. -5015 Dec 11 j 13:22 12°843'33 17.35965 AU conjunction -5021 May 14 j 08:13 12°**Υ**23'54 0°-21'-46 direct -5014 Feb 24 j 11:36 10°**8**40'12 minimum elong -5021 May 14 j 08:13 12°**Υ**23'54 0°21'44 -5014 Jun 14 j 02:56 15°**႘** retrograde -5021 Aug 31 j 12:00 16°**Υ**43'01 max. Earth dist. -5014 Jun 15 j 19:25 15°**8**06'21 19.34118 AU opposition -5021 Nov 13 j 03:12 14°**Υ**'40'57 min. Earth dist. -5021 Nov 14 j 04:03 14°**Υ**38'14 17.66759 AU conjunction -5014 Jun 17 j 05:01 15°**8**11'36 direct -5020 Jan 27 j 13:50 12°**Υ**36'09 minimum elong -5014 Jun 17 j 05:00 15°**8**11'36 max. Earth dist. $-5020 \text{ May } 17 \text{ j } 04:07 \quad 16^{\circ} \Upsilon 55'56 \quad 19.63713 \text{ AU}$ behind sun begin -5014 Jun 16 j 22:48 15°**8**10'39 behind sun end -5014 Jun 17 j 11:12 15° \$\frac{12}{33}\$ conjunction -5020 May 18 j 09:58 17°**Υ**00'29 0°-17'-57 retrograde -5014 Oct 03 i 03:10 19°\(\alpha \) 34'28 minimum elong -5020 May 18 j 09:58 17°**Υ**'00'29 0°17'54 opposition -5014 Dec 15 i 07:29 17°\(\alpha \)32'02 0°10'04 -5020 Sep 04 i 09:38 21° Υ 20'19 min. Earth dist. -5014 Dec 16 j 11:30 17°828'58 17.32512 AU retrograde -5020 Nov 16 j 22:02 19°**Υ** 18'11 0°-17'-47 direct -5013 Mar 01 j 14:03 15°**8**25'18 opposition min. Earth dist. -5020 Nov 17 j 23:36 19°**Υ**15'24 17.60770 AU max. Earth dist. -5013 Jun 21 j 00:13 19°852'23 19.30977 AU -5019 Jan 31 j 11:52 17° Υ 13'05 direct max. Earth dist. -5019 May 22 j 04:12 21°**Υ**'33'54 19.57839 AU -5013 Jun 22 j 08:51 19°**8**57'30 0°11'11 conjunction -5013 Jun 22 j 08:50 19°**8**57'30 minimum elong 0°11'23 -5019 May 23 j 12:21 21° Υ 38'49 0°-13'-59 -5013 Jun 22 j 03:59 19°**8**56'45 conjunction behind sun begin -5019 May 23 j 12:21 21°**Υ**38'49 -5013 Jun 22 j 13:42 19°**8**58'15 0°13'55 behind sun end minimum elong -5019 May 23 j 09:03 21°**Υ**38'20 -5013 Oct 08 j 02:56 24°820'40 behind sun begin retrograde -5019 May 23 j 15:38 21°**Υ**39'19 -5013 Dec 20 j 07:42 22°818'15 0°14'43 behind sun end opposition -5019 Sep 09 j 06:37 25°**Υ**59'18 -5013 Dec 21 j 12:15 22°815'07 17.29707 AU retrograde min. Earth dist. -5019 Nov 21 j 17:38 23°**Υ**57'07 0°-13'-19 -5012 Mar 05 j 15:22 20°**8**11'25 opposition direct min. Earth dist. -5019 Nov 22 j 20:58 23°**Υ**54'08 17.55038 AU max. Earth dist. -5012 Jun 25 j 04:04 24°839'10 19.28509 AU direct $-5018 \text{ Feb } 05 \text{ j } 09:52 \quad 21^{\circ} \Upsilon 51'39$ max. Earth dist. -5018 May 27 j 06:55 26° **Y** 13'46 19.52253 AU conjunction -5012 Jun 26 j 12:32 24°**8**44'16 0°15'18 minimum elong -5012 Jun 26 j 12:31 24°**8**44'16 0°15'30 -5018 May 28 j 15:15 26° **Y** 18'46 0° -9'-55 behind sun begin -5012 Jun 26 j 10:59 24°**8**44'02 conjunction -5018 May 28 j 15:16 26°**Υ**18'46 behind sun end -5012 Jun 26 j 14:04 24°**8**44'31 minimum elong -5018 May 28 j 09:47 26°Υ17'56 retrograde -5012 Oct 12 j 04:18 29°807'41 behind sun begin behind sun end -5018 May 28 j 20:44 26°**Υ**19'35 -5012 Dec 24 j 08:25 27°805'20 0°19'17 opposition -5018 Aug 07 i 01:57 -5012 Dec 25 j 11:23 27°802'23 17.27564 AU 0°8 min. Earth dist. -5018 Sep 14 i 05:39 retrograde 0°**႘**39'49 direct -5011 Mar 10 j 18:50 24°858'29 -5018 Oct 23 i 01:51 30°R℃ -5011 Jun 30 j 09:44 29°**8**27'01 19.26690 AU max. Earth dist. -5018 Nov 26 j 14:06 28°**Υ**'37'34 0°-8'-44 opposition min. Earth dist. -5018 Nov 27 i 17:31 28°**Υ**'34'34 17.49612 AU -5011 Jul 01 j 16:26 29°\(\mathbf{3}\)31'52 0°19'20 conjunction direct -5017 Feb 10 j 10:15 26° **Y** 31'49 -5011 Jul 01 j 16:26 29°\(\mathbf{2}31\)'52 0°19'34 minimum elong -5017 May 17 j 10:56 0°8 -5011 Jul 09 j 02:46 $\mathbb{I}^{\circ 0}$ max. Earth dist. -5017 Jun 01 j 08:42 0°**8**54'56 19.47007 AU retrograde -5011 Oct 17 j 04:24 3°**I**155′26 opposition -5011 Dec 29 j 09:53 1°II53'11 0°23'44 1°800'08 0°-5'-47 conjunction -5017 Jun 02 j 18:16 min. Earth dist. -5011 Dec 30 j 13:03 1°**Д**50'14 17.26068 AU minimum elong -5017 Jun 02 j 18:17 1°**8**00'08 0°05'41 -5010 Feb 21 j 01:42 30°R₩ behind sun begin -5017 Jun 02 j 11:48 0°**8**59'09 direct -5010 Mar 15 j 22:00 29°**8**46'22 -5017 Jun 03 j 00:46 1°801'07 -5010 Apr 07 j 15:52 $0^{\circ}\Pi$ behind sun end -5017 Sep 19 j 03:17 5°**8**21'45 retrograde -5017 Dec 01 j 11:26 3°**8**19'25 0°-4'-4 -5010 Jul 06 j 20:04 4°**Ⅲ**20'08 0°23'16 opposition conjunction 3°**8**16'16 17.44582 AU -5010 Jul 06 j 20:04 min. Earth dist. -5017 Dec 02 j 16:16 minimum elong 4°**I**I20′08 0°23′30 -5010 Jul 05 j 13:29 direct -5016 Feb 15 j 09:30 1°**8**13'21 max. Earth dist. 4°**I**15'17 19.25519 AU retrograde -5010 Oct 22 j 05:29 8°**Ⅲ**43′50 conjunction -5016 Jun 06 j 21:40 5°**8**42'49 0°-1'-33 opposition -5009 Jan 03 j 11:54 6°**Ⅱ**41'41 0°28'02 minimum elong -5016 Jun 06 j 21:41 5°**8**42'49 0°01'25 min. Earth dist. -5009 Jan 04 j 13:26 6°**II**38'54 17.25206 AU behind sun begin -5016 Jun 06 j 14:56 5°841'48 -5009 Mar 21 j 02:43 4°**Ⅲ**34'56 direct

behind sun end

-5016 Jun 07 j 04:27

5°**8**43'51

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -5009 in astronomical counting style is the year 5010 BCE in historical counting style. 9°**I**108'54 0°27'02 -5009 Jul 11 i 23:34 conjunction -5001 Aug 19 i 10:38 17°527'48 0°48'23 conjunction minimum elong -5009 Jul 11 j 23:34 9°II08'54 0°27'17 -5001 Aug 19 j 10:37 17°527'48 0°48'40 minimum elong -5009 Jul 10 j 19:18 9°**Ⅱ**04'26 19.24949 AU -5001 Aug 18 j 20:23 17°\$25'32 19.39202 AU max. Earth dist. max. Earth dist. -5001 Dec 04 j 09:02 21°548'40 -5009 Oct 27 j 06:02 13°**Ц**32'37 retrograde retrograde -5000 Feb 16 j 18:17 19°547'09 0°54'43 -5008 Jan 08 j 14:32 11°**Д**30'36 0°32'09 opposition opposition -5000 Feb 17 j 05:45 19°545'56 17.41221 AU -5008 Jan 09 j 15:48 11°**Д**27'51 17.24920 AU min. Earth dist. min. Earth dist. -5008 Mar 25 j 07:49 -5000 May 04 j 00:27 17°541'47 direct 9°**Ⅱ**23'57 direct max. Earth dist. -5008 Jul 14 j 22:37 13°**Ц**53'30 19.24944 AU conjunction -5000 Aug 23 j 08:42 22°510'23 0°49'41 conjunction -5008 Jul 16 j 02:48 13°**II**57'58 0°30'37 minimum elong -5000 Aug 23 j 08:42 22°510'23 0°49'56 minimum elong -5008 Jul 16 j 02:48 13°**Д**57'58 0°30'53 max. Earth dist. -5000 Aug 22 j 21:04 22°508'33 19.43334 AU -5008 Oct 31 j 06:45 18°**Д**21'37 -5000 Dec 08 j 06:29 26°530'37 retrograde retrograde -5007 Jan 12 j 17:21 16°**Ⅱ**19'42 0°36'03 -4999 Feb 20 j 21:15 24°529'11 opposition opposition 0°55'58 min. Earth dist. -5007 Jan 13 j 17:10 16°**Ⅱ**17'07 17.25188 AU min. Earth dist. -4999 Feb 21 j 07:14 24°528'08 17.45635 AU direct -5007 Mar 30 j 13:23 14°**Ⅱ**13'08 direct -4999 May 09 j 03:10 22°524'08 max. Earth dist. -5007 Jul 20 j 04:11 18°**Ⅲ**42'58 19.25468 AU conjunction -4999 Aug 28 j 05:54 26°551'31 0°50'38 conjunction -5007 Jul 21 j 05:54 18°**Д**47'03 0°33'59 minimum elong -4999 Aug 28 j 05:54 26°551'31 0°50'53 minimum elong -5007 Jul 21 j 05:54 18°**Ⅱ**47'03 0°34'14 max. Earth dist. -4999 Aug 27 j 20:42 26°\$50'03 19.48029 AU retrograde -5007 Nov 05 j 07:34 23°**Ⅲ**10'32 -4999 Oct 22 j 15:14 $0^{\circ}\Omega$ opposition -5006 Jan 17 j 20:48 21°**Д**08'43 0°39'41 retrograde -4999 Dec 13 j 05:44 1°**Ω**11′05 min. Earth dist. -5006 Jan 18 j 19:44 21°**Д**06'14 17.25959 AU -4998 Feb 05 i 13:27 30° R 55 direct -5006 Apr 04 i 18:57 19°**Ⅲ**02'17 opposition -4998 Feb 25 i 23:53 29°509'46 0°56'50 max. Earth dist. -5006 Jul 25 j 07:00 23°**I**[31'52 19.26494 AU min. Earth dist. -4998 Feb 26 i 06:16 29°509'05 17.50582 AU direct -4998 May 14 j 07:17 27°505'04 -5006 Jul 26 j 08:15 23°**Д**35'53 0°37'07 -4998 Aug 08 j 12:20 conjunction $0^{\circ}\Omega$ -5006 Jul 26 j 08:15 23°**II**35'53 minimum elong 0°37'23 -5006 Nov 10 j 08:27 27°**Д**59'08 -4998 Sep 02 j 02:11 1°Ω31'09 0°51'15 retrograde conjunction -5005 Jan 23 j 00:25 25°**I**57'23 0°43'02 -4998 Sep 02 j 02:11 1°**Ω**31'09 0°51'30 opposition minimum elong -4998 Sep 01 j 20:11 -5005 Jan 23 j 21:55 25° **II** 55'04 17.27241 AU 1°**Ω**30'12 19.53229 AU min. Earth dist. max. Earth dist. -5005 Apr 10 j 00:13 23°**Ⅲ**51'05 -4998 Dec 18 j 02:10 5°**Ω**50′03 direct retrograde -5005 Jul 30 j 11:39 28°**Д**20'37 19.28024 AU opposition -4997 Mar 03 j 02:16 3°**Ω**48'52 0°57'19 max. Earth dist. -4997 Mar 03 j 07:10 min. Earth dist. 3°**Ω**48'21 17.56020 AU -4997 May 19 j 08:52 -5005 Jul 31 j 10:16 28°**Ⅲ**24'13 0°39'59 1°**Ω**44'36 conjunction direct -5005 Jul 31 j 10:16 28°**Ⅲ**24'13 0°40'14 minimum elong 6°**Ω**09'17 0°51'33 -5005 Aug 26 j 00:57 -4997 Sep 06 j 21:40 0ಂತಾ conjunction -5005 Nov 15 j 09:20 -4997 Sep 06 j 21:40 6°**Ω**09'17 0°51'46 retrograde 2°9547'07 minimum elong -4997 Sep 06 j 17:41 opposition -5004 Jan 28 j 04:03 0°545'27 0°46'04 max. Earth dist. 6°**Ω**08'40 19.58895 AU min. Earth dist. -5004 Jan 28 j 23:56 0°9543'19 17.29007 AU retrograde -4997 Dec 23 j 00:22 $10^{\circ}\Omega$ 27'29 -5004 Feb 15 j 04:40 30°RⅡ opposition -4996 Mar 07 j 03:52 8°**Ω**26'28 0°57'26 direct -5004 Apr 14 j 05:27 28°**Ц**39'17 min. Earth dist. -4996 Mar 07 j 05:19 8°**Ω**26'19 17.61877 AU -5004 Jun 09 j 17:10 -4996 May 23 j 11:35 6°**£**22'38 0ಂಣ direct -5004 Aug 04 j 11:32 3°511'48 0°42'33 -4996 Sep 10 j 16:26 10° **Ω**45'54 0°51'30 conjunction conjunction -5004 Aug 04 j 11:32 3°511'48 0°42'49 -4996 Sep 10 j 16:26 10° Ω 45'54 0°51'44 minimum elong minimum elong -5004 Aug 03 i 13:56 -4996 Sep 10 j 15:44 10° Ω 45'47 19.64929 AU max. Earth dist. 3°508'22 19.30042 AU max. Earth dist. -5004 Nov 19 i 09:42 -4996 Dec 15 i 17:48 15°Ωretrograde 7°934'18 -5003 Feb 01 i 07:47 -4996 Dec 26 j 19:32 15° Ω 03'21 opposition 5°532'39 0°48'46 retrograde -4995 Jan 07 i 01:34 15°RΩ min. Earth dist. -5003 Feb 02 i 02:21 5°530'40 17.31279 AU direct -5003 Apr 19 j 10:06 3°926'38 $-4995 \text{ Mar } 12 \text{ i } 05:21 \quad 13^{\circ} \Omega 02'31 \quad 0^{\circ} 57'10$ opposition min. Earth dist. -4995 Mar 12 j 05:27 13° Ω 02'31 17.68069 AU -5003 Aug 09 j 12:06 7°958'23 0°44'49 direct -4995 May 28 j 11:41 10° Ω59'09 conjunction -5003 Aug 09 j 12:06 7°958'23 0°45'06 -4995 Sep 09 j 20:27 15°**Ω** minimum elong -5003 Aug 08 j 17:12 max. Earth dist. 7°555'23 19.32569 AU retrograde -5003 Nov 24 j 10:05 12°520'23 conjunction -4995 Sep 15 j 10:09 15° Ω 20'54 0°51'07 opposition -5002 Feb 06 j 11:28 10°518'48 0°51'07 minimum elong -4995 Sep 15 j 10:09 15° Ω 20'54 0°51'19 min. Earth dist. -5002 Feb 07 j 03:33 10°517'04 17.34048 AU max. Earth dist. -4995 Sep 15 j 11:05 15°**Ω**21'03 19.71269 AU -5002 Apr 24 j 15:37 8°9512'57 retrograde -4995 Dec 31 j 16:50 19°**Ω**37'37 direct -4994 Mar 17 j 06:12 $17^{\circ}\Omega$ 36'56 0° 56'33 opposition -5002 Aug 14 j 11:50 12°543'46 0°46'46 -4994 Mar 17 j 03:01 17°Ω37'16 17.74528 AU conjunction min. Earth dist. -5002 Aug 14 j 11:50 12°543'46 direct -4994 Jun 02 j 12:23 15° **Ω**34'00 minimum elong 0°47'02 max. Earth dist. -5002 Aug 13 j 18:52 12°541'04 19.35608 AU -4994 Sep 20 j 03:17 19°**Ω**54'13 0°50'25 retrograde -5002 Nov 29 j 09:09 17°505'14 conjunction opposition -5001 Feb 11 j 15:04 15°503'40 0°53'06 minimum elong -4994 Sep 20 j 03:18 19° Ω 54'13 0°50'36 min. Earth dist. -5001 Feb 12 j 05:42 15°502'06 17.37365 AU max. Earth dist. -4994 Sep 20 j 07:33 19°**Ω**54'53 19.77826 AU -5001 Apr 29 j 19:18 12°558'02 -4993 Jan 05 j 11:05 24° € 10'08 direct retrograde -4993 Mar 22 j 06:31 22°**Ω**09'37 0°55'34 opposition

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -4993 in astronomical counting style is the year 4994 BCE in historical counting style. -4993 Mar 22 j 02:01 22°Ω10'05 17.81173 AU min. Earth dist. opposition -4985 Apr 28 i 04:33 27° m 17'36 0°37'05 direct -4993 Jun 07 j 10:59 $20^{\circ}\Omega$ 07'08 direct -4985 Jul 13 j 22:49 25° m 18'06 -4993 Sep 24 j 19:24 24° **Ω**25'43 0°49'24 -4985 Oct 28 j 22:12 29° m 23'32 0°31'59 conjunction conjunction -4993 Sep 24 j 19:24 24° **Ω**25'43 0°49'35 -4985 Oct 28 j 22:12 29° m 23'32 0°32'00 minimum elong minimum elong -4993 Sep 25 j 00:52 $24^{\circ}\Omega 26'34$ 19.84542 AU -4985 Oct 29 j 20:08 29° m 26'49 20.39461 AU max. Earth dist. max. Earth dist. -4992 Jan 10 j 06:58 $28^{\circ} \Omega 40'50$ -4985 Nov 08 j 01:48 retrograde 0∘**⊽** -4984 Feb 14 j 12:16 opposition retrograde 3°**£**31'52 -4984 May 01 j 21:29 min. Earth dist. -4992 Mar 25 j 22:41 26° **Ω**41'12 17.87938 AU opposition 1°**≏**31'51 0°33'45 direct -4992 Jun 11 j 09:12 24° **Ω** 38'22 min. Earth dist. -4984 Apr 30 j 22:41 1°**2**34'10 18.42925 AU -4984 Jun 14 j 00:30 30°R, Mp -4992 Sep 28 j 10:51 28° **Ω**55'20 0°48'05 -4984 Jul 17 j 12:36 29° m 32'44 conjunction direct -4992 Sep 28 j 10:51 28° Ω55'20 0°48'14 -4984 Aug 19 j 02:41 minimum elong 0∘**⊽** max. Earth dist. -4992 Sep 28 j 19:28 28° Ω56'40 19.91334 AU -4992 Oct 16 j 01:00 0° m conjunction -4984 Nov 01 j 07:07 3°**₽**36'42 0°28'56 retrograde -4991 Jan 14 j 00:29 3°m/09'36 minimum elong -4984 Nov 01 j 07:08 3°**₽**36'42 0°28'57 opposition -4991 Mar 31 j 04:59 1° Mp 09'18 0°52'36 max. Earth dist. -4984 Nov 02 j 07:47 3°**£**40'23 20.46336 AU min. Earth dist. -4991 Mar 30 j 20:11 1° m 10'12 17.94750 AU retrograde -4983 Feb 18 j 00:25 7°**-**44'18 -4991 Apr 30 j 00:58 30°RΩ opposition -4983 May 06 j 13:34 5°**-**44'24 0°30'16 direct -4991 Jun 16 j 06:55 29°**Ω**07'39 min. Earth dist. -4983 May 05 j 12:43 5°**£**46'54 18.49748 AU -4991 Jul 31 j 15:06 direct -4983 Jul 22 j 03:40 3°**£**45'41 conjunction -4991 Oct 03 i 01:17 3° m 22'56 0°46'29 conjunction -4983 Nov 05 i 15:25 7°**2**48'13 0°25'44 minimum elong -4991 Oct 03 i 01:17 3° m 22'56 0°46'38 minimum elong -4983 Nov 05 i 15:25 7°**2**48'14 0°25'43 max. Earth dist. -4991 Oct 03 j 10:54 3° m 24'25 19.98170 AU max. Earth dist. -4983 Nov 06 i 16:43 7°**£**52'00 20.53103 AU retrograde -4990 Jan 18 j 18:48 7° m 36'21 retrograde -4982 Feb 22 j 13:01 11°**£**55'09 -4990 Apr 05 j 03:09 5° m 36'06 0° 50'39 -4982 May 10 j 03:15 9°**≏**57'56 18.56451 AU opposition min. Earth dist. -4990 Apr 04 j 15:46 5° m 37'16 18.01598 AU -4982 May 11 j 04:58 9°**£**55'21 min. Earth dist. opposition 0°26'39 -4990 Jun 21 j 02:56 3° m 34'49 -4982 Jul 26 j 15:36 direct direct 7°**£**57'01 -4990 Oct 07 j 14:56 7° mp 48'25 0°44'37 -4982 Nov 09 j 23:20 11°**£**58'14 0°22'25 conjunction conjunction minimum elong -4990 Oct 07 j 14:56 7° m 48'25 0°44'44 -4982 Nov 09 j 23:20 11°**£**58'14 0°22'23 minimum elong -4990 Oct 08 j 03:43 7° m 50'23 20.05017 AU -4982 Nov 11 j 02:55 12°**Ω**02'19 20.59706 AU max. Earth dist. max. Earth dist. -4989 Jan 23 j 11:09 12° M 00'57 -4981 Feb 27 j 00:40 16°**2**04'29 retrograde retrograde -4989 Apr 09 j 11:26 10° Mp 02'04 18.08440 AU -4981 May 15 j 19:27 14°**♀**04'49 0°22'54 min. Earth dist. opposition -4989 Apr 10 j 00:27 10° m 00'44 0°48'25 -4981 May 14 j 16:03 14°**2**07'34 18.62932 AU opposition min. Earth dist. -4989 Jun 25 j 23:53 7° **m** 59'49 -4981 Jul 31 j 04:46 12°**£**06'53 direct direct conjunction -4989 Oct 12 j 03:34 12° m 11'43 0°42'30 conjunction -4981 Nov 14 j 06:43 16°**△**06'49 0°19'01 -4989 Oct 12 j 03:34 12° m 11'43 0°42'37 minimum elong minimum elong -4981 Nov 14 j 06:42 16°**Ω**06'49 0°18'57 max. Earth dist. -4989 Oct 12 j 17:19 12° m 13'49 20.11866 AU max. Earth dist. -4981 Nov 15 j 10:30 16°**£**10'55 20.66051 AU retrograde -4988 Jan 28 j 03:32 16° M 23'22 retrograde -4980 Mar 02 j 11:38 20°**2**12'27 -4988 Apr 13 j 20:40 14° m 23'10 0°45'55 -4980 May 18 j 05:40 18°**2**15'39 18.69140 AU opposition min. Earth dist. min. Earth dist. -4988 Apr 13 j 05:29 14° m 24'43 18.15301 AU -4980 May 19 j 09:13 18°**£**12'53 0°19'04 opposition direct -4988 Jun 29 j 18:04 12° M 22'35 direct -4980 Aug 03 j 15:08 16° **2**15'18 -4988 Oct 15 j 15:30 16° m 32'48 0°40'10 -4980 Nov 17 j 13:51 20° **△**14'03 0°15'31 conjunction conjunction -4988 Oct 15 j 15:30 16° m 32'48 0°40'15 -4980 Nov 17 j 13:51 20°**£**14'03 minimum elong minimum elong 0°15'26 -4988 Oct 16 j 08:26 16° m 35'23 20.18731 AU max. Earth dist. behind sun begin -4980 Nov 17 j 11:44 20° **2**13'45 retrograde -4987 Jan 31 j 18:20 20° mp 43'34 behind sun end -4980 Nov 17 j 15:59 20° **△**14'21 -4987 Apr 18 i 16:13 18° m 43'24 0°43'11 max. Earth dist. -4980 Nov 18 j 19:23 20°**2**18'23 20.72089 AU opposition min. Earth dist. -4987 Apr 17 j 23:02 18° Mp 45'09 18.22174 AU retrograde -4979 Mar 06 j 22:51 24° **2**19'06 direct -4987 Jul 04 j 13:28 16° Mp 43'10 -4979 May 23 j 22:17 22° **2**19'37 0°15'08 opposition min. Earth dist. -4979 May 22 j 17:20 22° **2**2'31 18.74993 AU conjunction -4987 Oct 20 j 02:19 20° m 51'43 0°37'37 direct -4979 Aug 08 j 02:58 20°**♀**22'21 minimum elong -4987 Oct 20 j 02:19 20° m 51'43 0°37'41 max. Earth dist. -4987 Oct 20 j 20:22 20° m 54'27 20.25620 AU conjunction -4979 Nov 21 j 20:24 24°**£**19'58 0°11'58 retrograde -4986 Feb 05 j 09:13 25° m 01'40 -4979 Nov 21 j 20:25 24°**£**19'58 0°11'53 minimum elong -4986 Apr 23 j 10:56 23° m 01'30 0°40'14 -4979 Nov 21 j 15:48 24°**£**19'19 opposition behind sun begin -4986 Apr 22 j 15:43 23° Mp 03'27 18.29090 AU -4979 Nov 22 j 01:02 24°**£**20'38 min. Earth dist. behind sun end -4986 Jul 09 j 05:40 21° m 01'37 -4979 Nov 23 j 01:50 24°**£**24'16 20.77741 AU direct max. Earth dist. retrograde -4978 Mar 11 j 08:26 28° **2**24'29 conjunction -4986 Oct 24 j 12:42 25° m 08'35 0°34'53 min. Earth dist. -4978 May 27 j 06:11 26°**2**27'56 18.80446 AU minimum elong -4986 Oct 24 j 12:42 25° m 08'35 0°34'56 opposition -4978 May 28 j 10:48 26°**£**25'04 0°11'10 max. Earth dist. -4986 Oct 25 j 09:47 25° m 11'46 20.32542 AU direct -4978 Aug 12 j 11:50 24°**£**28'04 -4985 Feb 09 j 22:31 29° m 17'42 retrograde

conjunction

-4978 Nov 26 j 02:56 28°**2**24'37 0°08'23

min. Earth dist.

-4985 Apr 27 j 07:15 27° Mp 19'46 18.36013 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -4978 in astronomical counting style is the year 4979 BCE in historical counting style. -4978 Nov 26 i 02:56 28° \(\Omega\) 24'37 0°08'16 minimum elong -4972 Dec 19 i 10:46 22° ML27'48 0°13'21 minimum elong -4978 Nov 25 j 21:07 28° **2**23'47 -4972 Dec 19 i 06:56 22° M27'16 behind sun begin behind sun begin -4978 Nov 26 j 08:44 28° **2**25'26 -4972 Dec 19 j 14:35 22° M28'20 behind sun end behind sun end -4972 Dec $20\,\mathrm{j}\,18:45$ $22^\circ\text{ML}32'23$ $21.05522\,\mathrm{AU}$ -4978 Nov 27 j 09:34 28° **2**29'05 20.82971 AU max. Earth dist. max. Earth dist. -4978 Dec 24 j 01:39 0°M -4971 Apr 08 j 20:35 26°M29'26 retrograde retrograde -4977 Mar 15 j 18:48 2°M28'35 min. Earth dist. -4971 Jun 24 j 23:11 24°M 33'00 19.06854 AU -4971 Jun 26 j 05:29 24° M29'58 0°-16'-26 opposition -4977 Jun 01 j 22:13 0°M29′12 0°07'09 opposition -4971 Sep 09 j 15:53 22°M33'57 min. Earth dist. -4977 May 31 j 16:32 0°ጤ32'10 18.85444 AU direct -4977 Jun 14 j 05:18 30°R<u>Ω</u> 28°**≏**32'26 direct -4977 Aug 16 j 22:16 conjunction -4971 Dec 23 j 15:32 26°M25'19 0°-16'-32 -4971 Dec 23 j 15:32 26°M25'19 0°16'46 -4977 Oct 15 j 16:42 0°M minimum elong -4971 Dec 24 j 22:46 26°M29'47 21.07999 AU max. Earth dist. -4977 Nov 30 j 08:53 -4970 Mar 10 j 16:12 conjunction 2°M27'59 0°04'46 0°⊀ minimum elong -4977 Nov 30 j 08:53 2° M27'59 0°04'39 retrograde -4970 Apr 13 j 03:27 0°**х** 26'47 behind sun begin -4977 Nov 30 j 02:28 2°M27'05 -4970 May 17 j 07:31 30°RM behind sun end -4977 Nov 30 j 15:18 2° M28'54 min. Earth dist. -4970 Jun 29 j 07:56 28°ML30'14 19.09148 AU max. Earth dist. -4977 Dec 01 j 15:03 2°M32'22 20.87737 AU opposition -4970 Jun 30 j 12:54 28°M27'20 0°-20'-9 retrograde -4976 Mar 19 j 02:58 6°ML31'27 direct -4970 Sep 13 j 19:45 26°M31'24 min. Earth dist. -4976 Jun 04 j 04:12 4°**ጤ**34'58 18.89993 AU -4970 Dec 21 j 07:18 0°×7 4°M32'05 opposition -4976 Jun 05 j 09:12 0°03'08 direct -4976 Aug 20 j 05:52 2°M35'28 conjunction -4970 Dec 27 j 20:36 0°**∡**¹22'26 0°-19'-51 minimum elong -4970 Dec 27 i 20:36 0°**х** 22′26 0°20'05 conjunction -4976 Dec 03 i 14:28 6°M30'06 0°01'07 max. Earth dist. -4970 Dec 29 i 04:12 0° **₹** 26'57 21.10102 AU minimum elong -4976 Dec 03 i 14:28 6°M30'06 0°00'57 retrograde -4969 Apr 17 i 12:39 4°×23'45 behind sun begin -4976 Dec 03 i 07:56 6°M29'10 opposition -4969 Jul 04 j 19:36 2°×724'20 0°-23'-46 -4976 Dec 03 j 21:01 6°ML31'01 -4969 Jul 03 j 14:11 2°**₹**27'17 19.11041 AU behind sun end min. Earth dist. -4976 Dec 04 j 21:46 6°M34'38 20.92067 AU -4969 Sep 18 j 01:43 0°\$28'30 max. Earth dist. direct -4975 Mar 23 j 12:24 10° ML33'05 retrograde -4975 Mar 23 j 13:27 10°M233'05 -4968 Jan 01 j 01:37 4°**✓**19'18 0°-23'-5 conjunction desc. node -4968 Jan 01 j 01:37 -4975 Jun 09 j 19:20 4°**х** 19'18 0°23'20 opposition 8°M-33'41 0°00'-51 minimum elong min. Earth dist. -4975 Jun 08 j 13:12 -4968 Jan 02 j 08:05 4° ₹23'38 21.11780 AU 8°ጤ36'42 18.94105 AU max. Earth dist. -4975 Aug 24 j 14:41 retrograde -4968 Apr 20 j 19:18 6°M37'14 8°**х** 20′34 direct -4968 Jul 06 j 22:38 min. Earth dist. 6°**尽**23'58 19.12502 AU 6°**∡**′21′11 -4975 Dec 07 j 19:45 10°M31'00 0°-2'-35 -4968 Jul 08 j 02:19 conjunction opposition 0°-27'-16 -4975 Dec 07 j 19:46 10°M31'00 -4968 Sep 21 j 04:41 minimum elong 0°02'45 direct 4°**х** 25′25 -4975 Dec 07 j 13:13 10°M 30'05 behind sun begin -4975 Dec 08 j 02:19 10°M31'56 -4967 Jan 04 j 06:52 8° **₹**16'04 0°-26'-12 behind sun end conjunction max. Earth dist. -4975 Dec 09 j 02:38 10°M35'28 20.95974 AU minimum elong -4967 Jan 04 j 06:52 8°**х** 16′04 0°26′27 retrograde -4974 Mar 27 j 19:48 14°M33'35 max. Earth dist. -4967 Jan 05 j 13:20 8°**≯**20'24 21.13010 AU min. Earth dist. -4974 Jun 12 j 23:31 12°**M**37'04 18.97832 AU retrograde -4967 Apr 25 j 04:29 12°**尽** 17'20 -4974 Jun 14 j 04:49 12°M34'09 0°-4'-49 min. Earth dist. -4967 Jul 11 j 04:52 10° ₹ 20'46 19.13479 AU opposition -4974 Aug 28 j 21:07 10°M37'48 -4967 Jul 12 j 08:36 10° **₹** 17'58 direct opposition 0°-30'-39 -4967 Sep 25 j 10:35 8°**∡**¹22'15 direct -4974 Dec 12 j 00:58 14°M30'50 0°-6'-9 conjunction -4974 Dec 12 j 00:58 14°M30'49 -4966 Jan 08 j 12:27 12° ₹ 12'52 0°-29'-12 minimum elong conjunction -4974 Dec 11 j 18:45 14° ML29'57 -4966 Jan 08 j 12:27 12° ₹ 12'52 0°29'28 behind sun begin minimum elong -4974 Dec 12 i 07:10 14°M31'42 -4966 Jan 09 j 17:15 12° ₹ 16'58 21.13722 AU behind sun end max. Earth dist. -4974 Dec 13 j 08:46 14° ML 35'24 20.99514 AU max. Earth dist. retrograde -4966 Apr 29 i 11:30 16° ₹14'10 -4974 Dec 20 i 11:41 15°M opposition -4966 Jul 16 i 14:42 14° ₹ 14'50 0°-33'-54 -4973 Apr 01 i 04:40 18°ML33'01 min. Earth dist. -4966 Jul 15 j 13:15 14° ₹ 17'23 19.13923 AU retrograde -4973 Jun 17 j 07:10 16°M 36'36 19.01187 AU direct -4966 Sep 29 j 13:27 12° ₹ 19'06 min Earth dist -4973 Jun 18 j 13:31 16°M23'34 0°-8'-45 opposition -4973 Aug 02 j 18:09 15°RML -4965 Jan 12 j 18:31 16° **₹**109'47 0°-32'-3 conjunction -4965 Jan 12 j 18:30 16° **₹** 09'47 0°32'19 direct -4973 Sep 02 j 04:20 14°M37'19 minimum elong -4973 Oct 01 j 22:05 15°M max. Earth dist. -4965 Jan 13 j 22:36 16° ₹ 13'46 21.13884 AU retrograde -4965 May 03 j 20:18 20° **₹** 11'09 conjunction -4973 Dec 16 j 05:50 18°M29'42 0°-9'-40 opposition -4965 Jul 20 j 20:33 18° **₹** 11'48 0°-36'-58 -4973 Dec 16 j 05:49 18°M29'42 0°09'53 min. Earth dist. -4965 Jul 19 j 19:26 18° ₹ 14'20 19.13784 AU minimum elong -4973 Dec 16 j 00:27 18° ML 28'57 -4965 Oct 03 j 19:06 16° ₹ 16'01 behind sun begin direct -4973 Dec 16 j 11:12 18° ML30'27 behind sun end -4973 Dec 17 j 13:04 18°M34'11 21.02684 AU -4964 Jan 17 j 00:36 20° ₹ 06'50 0°-34'-46 max. Earth dist. conjunction retrograde -4972 Apr 04 j 11:41 22°M31'35 minimum elong -4964 Jan 17 j 00:36 20° ₹ 06'50 0°35'02 opposition -4972 Jun 21 j 21:48 20°M32'06 0°-12'-38 max. Earth dist. -4964 Jan 18 j 02:36 20° **₹** 10'31 21.13440 AU min. Earth dist. -4972 Jun 20 j 16:25 20°M 35'03 19.04194 AU retrograde -4964 May 07 j 03:37 24°**尽** 08'21 direct -4972 Sep 05 j 09:29 18°MJ35'59 min. Earth dist. -4964 Jul 23 j 03:45 22°**х** 11'14 19.13042 AU -4964 Jul 24 j 02:26 22° ₹ 08'56 0°-39'-52 opposition -4972 Dec 19 j 10:46 22°M27'48 0°-13'-8 -4964 Oct 06 j 22:22 20° ₹ 13'04 conjunction direct

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -4963 in astronomical counting style is the year 4964 BCE in historical counting style. -4963 Jan 20 i 07:14 24° ₹04'05 0°-37'-18 conjunction -4955 Feb 22 i 03:06 26°る00'05 0°-50'-27 conjunction minimum elong -4963 Jan 20 j 07:14 24° **₹** 04'05 0°37'36 -4955 Feb 22 j 03:06 26° **පි**00'05 0°50'42 minimum elong -4963 Jan 21 j 08:16 24° ₹07'38 21.12412 AU max. Earth dist. -4955 Feb 22 j 14:23 26°る01'41 20.87782 AU max. Earth dist. -4963 May 11 j 12:14 28°**✗** 05'45 -4955 May 30 j 07:34 retrograde 0°≈≈ -4955 Jun 13 j 11:26 0°≈04'56 -4963 Jul 27 j 09:45 26° ₹ 08'31 19.11718 AU min. Earth dist. retrograde -4963 Jul 28 j 07:55 26° **₹** 06'16 0°-42'-35 -4955 Jun 27 j 13:42 opposition 30°Ŗる -4963 Oct 11 j 03:36 24° ₹ 10'14 -4955 Aug 29 j 03:50 28°る04'44 0°-56'-12 direct opposition min. Earth dist. -4955 Aug 28 j 18:34 28°る05'41 18.85508 AU -4962 Jan 24 j 14:04 28° ₹01'34 0°-39'-40 -4955 Nov 11 j 18:12 26°**⋜**06'54 conjunction direct 28°**∡**101'34 0°39'57 -4962 Jan 24 j 14:04 -4954 Feb 25 j 09:53 minimum elong 0°≈ -4962 Jan 25 j 12:53 max. Earth dist. 28°**尽**04'47 21.10809 AU -4962 Mar 01 j 22:33 0°궁 -4954 Feb 26 j 14:29 0°≈04'05 0°-51'-4 conjunction -4954 Feb 26 j 14:29 retrograde -4962 May 15 j 19:32 2°る03'26 minimum elong 0°≈04'05 0°51'20 -4954 Feb 26 j 23:11 opposition -4962 Aug 01 j 13:28 0°**ට**03'51 0°-45'-6 max. Earth dist. 0°≈05'20 20.83111 AU min. Earth dist. -4962 Jul 31 j 17:51 0°る05'50 19.09848 AU retrograde -4954 Jun 17 j 20:28 4°≈09'35 -4962 Aug 03 j 03:20 30°R.**✓** opposition -4954 Sep 02 j 10:21 2°**≈**09'20 0°-56'-45 direct -4962 Oct 15 j 07:13 28°**х** 07′38 min. Earth dist. -4954 Sep 02 j 04:05 2°≈09'59 18.80656 AU -4962 Dec 23 j 04:06 0°る direct -4954 Nov 15 j 23:02 0°≈11'14 conjunction -4961 Jan 28 j 21:23 1°る59'20 0°-41'-51 conjunction -4953 Mar 03 j 02:41 4°**≈**09'35 0°-51'-26 minimum elong -4961 Jan 28 j 21:23 1°る59'20 0°42'08 minimum elong -4953 Mar 03 j 02:41 4°≈09'35 0°51'40 max. Earth dist. -4961 Jan 29 j 19:11 2°る02'26 21.08694 AU max. Earth dist. -4953 Mar 03 i 09:14 4°≈10'31 20.78078 AU retrograde -4961 May 20 i 04:31 6°る01'27 retrograde -4953 Jun 22 i 08:52 8°≈15'45 opposition -4961 Aug 05 i 18:35 4°**ප**01'45 0°-47'-23 opposition -4953 Sep 06 i 17:05 6°≈15'27 0°-57'-1 min. Earth dist. -4961 Aug 04 j 23:30 4°る03'42 19.07489 AU min. Earth dist. -4953 Sep 06 i 12:03 6°≈15'58 18.75423 AU -4961 Oct 19 j 12:15 2°る05'19 direct -4953 Nov 20 j 07:12 4°≈17'03 direct -4960 Feb 02 j 04:57 5°**ප**57'31 0°-43'-49 -4952 Mar 06 j 15:41 8°≈16'37 0°-51'-32 conjunction conjunction -4960 Feb 02 j 04:57 5°**ප**57'31 0°44'06 -4952 Mar 06 j 15:41 8°**≈**16'37 0°51'46 minimum elong minimum elong 6°る00'18 21.06113 AU -4952 Mar 06 j 19:27 -4960 Feb 03 j 00:37 max. Earth dist. max. Earth dist. 8°≈17'10 20.72639 AU -4960 May 23 j 11:37 9°**る**59'57 -4952 Jun 25 j 19:17 12°≈23'30 retrograde retrograde -4960 Aug 08 j 23:58 8°る00'08 0°-49'-28 -4952 Sep 10 j 00:27 10°≈23'06 0°-57'00 opposition opposition -4960 Aug 08 j 07:20 8°る01'49 19.04705 AU -4952 Sep 09 j 22:34 10°≈23'18 18.69783 AU min. Earth dist. min. Earth dist. -4960 Oct 22 j 15:53 6°る03'29 -4952 Nov 23 j 13:45 direct direct 8°≈24'23 -4959 Feb 05 j 12:58 9°**ප**56'15 0°-45'-35 -4951 Mar 11 j 05:32 12°≈25'13 0°-51'-21 conjunction conjunction -4951 Mar 11 j 05:32 12°≈25'13 0°51'35 -4959 Feb 05 j 12:58 9°る56'15 0°45'52 minimum elong minimum elong -4951 Mar 11 j 06:41 12°≈25'23 20.66805 AU max. Earth dist. -4959 Feb 06 j 07:38 9°る58'54 21.03140 AU max. Earth dist. retrograde -4959 May 27 j 21:40 13°**궁**59'04 -4951 Apr 28 j 10:40 15°≈ opposition -4959 Aug 13 j 05:11 11°る59'07 0°-51'-19 retrograde -4951 Jun 30 j 08:23 16°≈32'49 min. Earth dist. -4959 Aug 12 j 13:04 12°る00'46 19.01539 AU -4951 Sep 03 j 05:17 15°R≈ -4959 Oct 26 j 21:18 10°る02'14 -4951 Sep 14 j 08:12 14°≈32'18 0°-56'-40 direct opposition min. Earth dist. -4951 Sep 14 j 07:43 14°≈32'21 18.63738 AU -4958 Feb 09 j 21:35 13° ₹ 55'42 0°-47'-9 direct -4951 Nov 27 j 22:58 12°≈33'12 conjunction -4958 Feb 09 j 21:35 13° ₹55'42 0°47'25 -4950 Feb 15 j 15:12 15°≈ minimum elong -4958 Feb 10 j 14:02 13°る58'02 20.99790 AU max. Earth dist. -4958 Jun 01 i 04:58 17°る58'56 -4950 Mar 15 i 20:18 16°≈35'21 0°-50'-54 retrograde conjunction -4958 Aug 17 i 10:33 15°る58'55 0°-52'-55 -4950 Mar 15 j 20:18 16°≈35'21 opposition minimum elong 0°51'07 -4958 Aug 16 j 21:02 16°る00'18 18.98019 AU min. Earth dist. max. Earth dist. -4950 Mar 15 i 18:37 16°≈35'07 20.60559 AU -4958 Oct 31 j 00:42 14°る01'47 direct retrograde -4950 Jul 04 j 19:57 20°≈43'40 opposition -4950 Sep 18 i 16:26 18°≈43'02 0°-56'-2 -4957 Feb 14 j 06:52 17°る56'03 0°-48'-29 min. Earth dist. -4950 Sep 18 j 19:06 18°≈42'45 18.57309 AU conjunction -4957 Feb 14 j 06:52 17°る56'03 0°48'45 direct -4950 Dec 02 j 07:06 16°≈43'30 minimum elong -4957 Feb 14 j 22:00 17°る58'12 20.96113 AU max. Earth dist. -4957 Jun 05 j 15:52 21°る59'45 retrograde conjunction -4949 Mar 20 j 11:46 20°≈47'01 0°-50'-11 opposition -4957 Aug 21 j 16:01 19°₹59'40 0°-54'-16 minimum elong -4949 Mar 20 j 11:46 20°≈47'01 0°50'23 min. Earth dist. -4957 Aug 21 j 03:08 20°る00'59 18.94173 AU max. Earth dist. -4949 Mar 20 j 07:21 20°≈46'23 20.53979 AU -4957 Nov 04 j 07:06 18°**⋜**02'19 retrograde -4949 Jul 09 j 09:59 24°≈56'05 direct -4949 Sep 23 j 01:08 22°≈55'16 0°-55'-6 opposition -4956 Feb 18 j 16:29 21°る57'27 0°-49'-35 min. Earth dist. -4949 Sep 23 j 05:06 22°≈54'51 18.50578 AU conjunction -4956 Feb 18 j 16:29 21°る57'27 direct -4949 Dec 06 j 17:39 20°≈55'17 minimum elong 0°49'52 -4956 Feb 19 j 05:23 21°る59'17 20.92102 AU max. Earth dist. retrograde -4956 Jun 08 j 23:45 26°る01'43 conjunction -4948 Mar 24 j 03:52 25°≈00'13 0°-49'-11 opposition -4956 Aug 24 j 21:55 24°る01'33 0°-55'-22 minimum elong -4948 Mar 24 j 03:52 25°≈00'14 0°49'22 min. Earth dist. -4956 Aug 24 j 11:41 24°る02'36 18.90002 AU max. Earth dist. -4948 Mar 23 j 21:09 24°≈59'15 20.47115 AU -4956 Nov 07 j 10:44 22°る03'58 retrograde -4948 Jul 12 j 22:31 29°≈10'02 direct -4948 Sep 26 j 10:28 27°≈09'03 0°-53'-51 opposition

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•	nical year style is used: The		_	` //		, .	age 31
min. Earth dist.	-4948 Sep 26 j 17:18	-		opposition	-4940 Oct 30 j 12:40	2° \blace{\gamma}04'54	
direct	-4948 Dec 10 i 02:59		18.43008 AU	min. Earth dist.	-4940 Oct 31 j 08:56		17.87452 AU
direct	-4740 Dec 10 j 02.37	23 ~00 37		direct	-4939 Jan 13 j 16:07	0° Υ 01'16	17.07432 AU
conjunction	-4947 Mar 28 j 20:53	29° ≈ 15'01	0°-47'-55	direct	4757 Juli 15 j 10.07	0 10110	
minimum elong	-4947 Mar 28 j 20:54	29°≈15'01	0°48'05	conjunction	-4939 May 04 j 18:21	4° Υ 20'42	0°-28'-24
max. Earth dist.	-4947 Mar 28 j 11:28		20.40069 AU	minimum elong	-4939 May 04 j 18:21	4° Υ 20'42	0°28'25
man. Barun dige.	-4947 Apr 10 j 18:41	0° ∀	20.10009110	max. Earth dist.	-4939 May 03 j 16:20		19.84142 AU
retrograde	-4947 Jul 17 j 13:42	3° ¥ 25'36		retrograde	-4939 Aug 22 j 07:49	8° Ƴ 38'08	
opposition	-4947 Sep 30 j 20:05	1° ¥ 24'26	0°-52'-19	opposition	-4939 Nov 04 j 04:36		0°-29'-41
min. Earth dist.	-4947 Oct 01 j 04:14	1° ∺ 23'34	18.36491 AU	min. Earth dist.	-4939 Nov 05 j 02:31	6° Ƴ 33'53	17.80884 AU
	-4947 Nov 06 j 12:29	30° R ≈		direct	-4938 Jan 18 j 10:01	4° Ƴ 32'17	
direct	-4947 Dec 14 j 14:51	29° ≈ 23'31			•		
	-4946 Jan 21 j 04:50	0°) €		conjunction	-4938 May 09 j 18:57	8° Ƴ 53'21	0°-24'-55
				minimum elong	-4938 May 09 j 18:57	8° Ƴ 53'21	0°24'54
conjunction	-4946 Apr 02 j 14:48	3°) (31′27	0°-46'-22	max. Earth dist.	-4938 May 08 j 16:13	8° Ƴ 49'18	19.77620 AU
minimum elong	-4946 Apr 02 j 14:48	3° ¥ 31′27	0°46'31	retrograde	-4938 Aug 27 j 04:33	13° Y 11'33	
max. Earth dist.	-4946 Apr 02 j 03:27	3°) €29'47	20.32893 AU	opposition	-4938 Nov 08 j 21:38	11° Y 09'39	0°-25'-43
retrograde	-4946 Jul 22 j 03:37	7°) 42′50		min. Earth dist.	-4938 Nov 09 j 20:57	11° Y 07'07	17.74422 AU
opposition	-4946 Oct 05 j 06:35	5°) 41'30	0°-50'-28	direct	-4937 Jan 23 j 05:15	9° Ƴ 05'20	
min. Earth dist.	-4946 Oct 05 j 17:17	5°) 40′22	18.29287 AU				
direct	-4946 Dec 19 j 01:40	3°) 40′07		conjunction	-4937 May 14 j 19:50	13° Y 27′57	0°-21'-15
				minimum elong	-4937 May 14 j 19:50	13° Y 27′57	0°21'14
conjunction	-4945 Apr 07 j 09:15	7°) 49′36	0°-44'-33	max. Earth dist.	-4937 May 13 j 14:15	13° Y 23′27	19.71228 AU
minimum elong	-4945 Apr 07 j 09:15	7°) 49′36	0°44'41	retrograde	-4937 Sep 01 j 00:08		
max. Earth dist.	-4945 Apr 06 j 19:15	7°) 47′33	20.25682 AU	opposition	-4937 Nov 13 j 15:28		
retrograde	-4945 Jul 26 j 19:48	12° 米 01′50		min. Earth dist.	-4937 Nov 14 j 16:23		17.68122 AU
opposition	-4945 Oct 09 j 17:37	10°) 00′20	0°-48'-20	direct	-4936 Jan 28 j 01:46	13° Y 40'14	
min. Earth dist.	-4945 Oct 10 j 05:25		18.22083 AU				
direct	-4945 Dec 23 j 14:46	7° ∺ 58'31		conjunction	-4936 May 18 j 21:37	18° Y 04′20	0°-17'-26
				minimum elong	-4936 May 18 j 21:37	18° Ƴ 04'20	0°17'23
conjunction	-4944 Apr 11 j 04:41			max. Earth dist.	-4936 May 17 j 15:39	17° Ƴ 59'45	19.65015 AU
minimum elong	-4944 Apr 11 j 04:41			retrograde	-4936 Sep 04 j 21:29	22° Y 23′58	
max. Earth dist.	-4944 Apr 10 j 13:17		20.18488 AU	opposition	-4936 Nov 17 j 09:59		
retrograde	-4944 Jul 30 j 11:26			min. Earth dist.	-4936 Nov 18 j 11:46		17.62014 AU
opposition	-4944 Oct 13 j 05:24			direct	-4935 Jan 31 j 23:34	18° Y 16′52	
min. Earth dist.	-4944 Oct 13 j 19:25		18.14926 AU				
direct	-4944 Dec 27 j 03:11			conjunction	-4935 May 23 j 23:49		0°-13'-29
max. Earth dist.	-4943 Apr 15 j 06:41	16° ¥ 28'51	20.11384 AU	minimum elong	-4935 May 23 j 23:49		0°13'25
				behind sun begin	-4935 May 23 j 20:08	22° Y 41'50	
conjunction	-4943 Apr 16 j 00:52		0°-40'-9	behind sun end	-4935 May 24 j 03:30	22° Y 42'56	
minimum elong	-4943 Apr 16 j 00:52		0°40'14	max. Earth dist.	-4935 May 22 j 15:29		19.59033 AU
retrograde	-4943 Aug 04 j 04:55			retrograde	1 3	27° Y ′02'40	
opposition	-4943 Oct 17 j 17:57			opposition	-4935 Nov 22 j 05:28	25° Y 00′30	
min. Earth dist.	-4943 Oct 18 j 09:07		18.07875 AU	min. Earth dist.	-4935 Nov 23 j 08:47		17.56185 AU
direct	-4943 Dec 31 j 17:30	16° ∺ 41'10		direct	-4934 Feb 05 j 21:55		
	4040 4 20122 5	2001/25:2	00.271.24	max. Earth dist.	-4934 May 27 j 18:07	27°° y ′16'57	19.53361 AU
conjunction	-4942 Apr 20 j 22:03				402434 20:02:5	270002117	00.01.26
minimum elong	-4942 Apr 20 j 22:03	20° ¥ 55'35		conjunction	-4934 May 29 j 02:26		0°-9'-26
max. Earth dist.	-4942 Apr 20 j 02:50		20.04381 AU	minimum elong	-4934 May 29 j 02:25	27° Υ 21'55	0°09'21
retrograde	-4942 Aug 08 j 22:34		00 401 12	behind sun begin	-4934 May 28 j 20:47		
opposition	-4942 Oct 22 j 07:18			behind sun end	-4934 May 29 j 08:04	27° Y 22'46	
min. Earth dist.	-4942 Oct 23 j 00:27		18.00934 AU		-4934 Jul 13 j 16:53	0°8	
direct	-4941 Jan 05 j 07:49	21° 大 05'40		retrograde	-4934 Sep 14 j 16:31	1° 8 42'46	
. ,.	4041 A 25:10.55	250\/21145	00 241 45	*,*	-4934 Nov 19 j 14:49	30°RΥ	00 01 12
conjunction	-4941 Apr 25 j 19:55			opposition	-4934 Nov 27 j 01:40	29° Y 40'31	0°-8'-12
minimum elong	-4941 Apr 25 j 19:55			min. Earth dist.	-4934 Nov 28 j 05:05		17.50691 AU
max. Earth dist.	-4941 Apr 24 j 21:48		19.97515 AU	direct	-4933 Feb 10 j 21:57	27° Y 34'47	
retrograde	-4941 Aug 13 j 17:09	29°) ₹37'28	00.241.57	D. d. C.	-4933 Apr 29 j 21:35	0°8	10 40067 444
opposition	-4941 Oct 26 j 21:30			max. Earth dist.	-4933 Jun 01 j 19:37	1.05/37	19.48067 AU
min. Earth dist.	-4941 Oct 27 j 15:58		17.94139 AU	aaminus -ti	4022 Jan 02:05:10	20 402150	00 51 10
direct	-4940 Jan 09 j 23:28	25° 大 32'22		conjunction	-4933 Jun 03 j 05:18	2° 8 02'50	0°-5'-19
in-	4040 4 20:10:12	2001/50100	00 211 41	minimum elong	-4933 Jun 03 j 05:17	2° 8 02'50	0°05'12
conjunction	-4940 Apr 29 j 18:43	29° ¥ 50′08	0°-31'-41	behind sun begin	-4933 Jun 02 j 22:44	2°801'50	
minimum elong	-4940 Apr 29 j 18:43	29°) 50'08	0°31'43	behind sun end	-4933 Jun 03 j 11:51	2° 8 03'49	
max. Earth dist.	-4940 Apr 28 j 19:49		19.90772 AU	retrograde	-4933 Sep 19 j 14:00	6° 8 24'13	00.21.22
, .	-4940 May 02 j 12:18	0° Υ		opposition	-4933 Dec 01 j 22:41	4° 8 21'52	
retrograde	-4940 Aug 17 j 12:46	4° Y 06'43		min. Earth dist.	-4933 Dec 03 j 03:21	4~018'44	17.45632 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, Attention, astronomical year style is used: The year -4932 in astronomical counting style is the year 4933 BCE in historical counting style. conjunction direct -4932 Feb 15 i 21:06 2°**8**15'48 -4926 Jul 07 j 05:58 5°II19'32 0°23'33 5°**Ⅱ**19'32 0°23'47 -4932 Jun 05 j 23:03 6°**႘**39'48 19.43242 AU -4926 Jul 07 j 05:58 max. Earth dist. minimum elong -4926 Oct 22 j 16:13 9°**Ⅱ**43'03 retrograde -4925 Jan 03 j 22:04 -4932 Jun 07 j 08:26 6°**8**44'59 0°-1'-6 7°**II**40'56 0°28'21 conjunction opposition -4932 Jun 07 j 08:26 6°**8**44'59 min. Earth dist. -4925 Jan 04 j 23:49 7°**Д**38'08 17.26163 AU minimum elong 0°00'58 -4925 Mar 21 j 13:27 6°843'58 -4932 Jun 07 j 01:41 behind sun begin direct 5°**Ⅲ**34'12 -4932 Jun 07 j 15:11 6°846'00 max. Earth dist. -4925 Jul 11 j 04:49 10°**Д**03'26 19.25822 AU behind sun end asc. node -4932 Sep 10 j 09:20 11°**8**01'54 -4925 Jul 12 j 09:33 10°**Ⅲ**07'59 0°27'17 retrograde -4932 Sep 23 j 14:08 11°**8**06'50 conjunction -4925 Jul 12 j 09:33 10°**Ⅲ**07'59 opposition -4932 Dec 05 j 20:24 9°**8**04'25 0°01'07 minimum elong 0°27'32 -4925 Oct 27 j 15:48 14°**Д**31'31 min. Earth dist. -4932 Dec 07 j 00:29 9°**8**01'21 17.41054 AU retrograde -4924 Jan 09 j 00:29 12°**Ⅲ**29'31 direct -4931 Feb 19 j 22:38 6°**8**58'05 opposition 0°32'25 -4931 Jun 11 j 02:07 11°**8**23'02 19.38928 AU -4924 Jan 10 j 02:15 12°**Д**26'43 17.25706 AU max. Earth dist. min. Earth dist. direct -4924 Mar 25 j 16:51 10°**Ⅲ**22'51 conjunction -4931 Jun 12 j 11:51 11°**8**28'17 0°03'12 max. Earth dist. -4924 Jul 15 j 08:00 14°**Д**52'09 19.25627 AU minimum elong -4931 Jun 12 j 11:51 11°**8**28'17 0°03'23 behind sun begin -4931 Jun 12 j 05:08 11°**8**27'16 conjunction -4924 Jul 16 j 12:44 14°**Ц**56'42 0°30'50 behind sun end -4931 Jun 12 j 18:34 11°**8**29'18 minimum elong -4924 Jul 16 j 12:43 14°**Д**56'42 0°31'05 -4931 Aug 16 j 15:23 15°**8** retrograde -4924 Oct 31 j 17:33 19°**Ⅲ**20'12 retrograde -4931 Sep 28 j 12:20 15°850'33 opposition -4923 Jan 13 j 03:19 17°**Ⅲ**18'16 0°36'16 -4931 Nov 11 j 12:36 15°R8 min. Earth dist. -4923 Jan 14 j 03:30 17°**Д**15'39 17.25766 AU -4923 Mar 30 j 23:18 15°**Ⅲ**11'41 opposition -4931 Dec 10 j 18:59 13°848'06 0°05'49 direct min. Earth dist. -4931 Dec 11 i 23:59 13°**8**44'55 17.37038 AU direct -4930 Feb 24 i 22:18 11°**8**41'32 conjunction -4923 Jul 21 j 15:41 19°**Д**45'27 0°34'10 -4930 May 29 i 01:22 15°8 -4923 Jul 21 i 15:41 19°**Д**45'27 0°34'26 minimum elong -4930 Jun 16 j 06:04 16°807'26 19.35214 AU max. Earth dist. -4923 Jul 20 j 13:25 19°**Д**41'17 19.25932 AU max Farth dist -4923 Nov 05 j 17:20 24°**Д**08'48 retrograde -4930 Jun 17 j 15:24 16°812'39 0°07'24 -4922 Jan 18 j 06:38 22°**Д**06'57 0°39'51 conjunction opposition -4930 Jun 17 j 15:24 16°**8**12'39 -4922 Jan 19 j 06:07 22°**Д**04'25 17.26315 AU 0°07'34 min. Earth dist. minimum elong -4922 Apr 05 j 04:27 20°**Д**00'29 behind sun begin -4930 Jun 17 j 09:17 16°**8**11'43 direct -4930 Jun 17 j 21:31 16°**8**13'35 behind sun end -4930 Oct 03 j 13:49 20°835'17 -4922 Jul 26 j 18:03 24°**Д**33'58 0°37'15 conjunction retrograde -4922 Jul 26 j 18:03 24°**Ц**33'58 0°37'30 -4930 Dec 15 j 18:14 18°\(232'50\) 0°10'30 opposition minimum elong -4922 Jul 25 j 16:11 24°**Д**29'52 19.26742 AU -4930 Dec 16 j 21:58 18°\(\mathbf{2}29'48 \) 17.33630 AU min. Earth dist. max. Earth dist. -4922 Nov 10 j 18:10 28°**Д**57'07 -4929 Mar 02 j 01:15 16°**8**26'08 direct retrograde -4929 Jun 21 j 10:22 20°852'55 19.32116 AU -4921 Jan 23 j 10:03 26°**Ⅲ**55'19 0°43'09 max. Earth dist. opposition -4921 Jan 24 j 07:54 26°**I** 52'58 17.27387 AU min. Earth dist. conjunction -4929 Jun 22 j 18:57 20°858'02 0°11'33 direct -4921 Apr 10 j 10:11 24°**Ц**48'57 -4929 Jun 22 j 18:57 20°**8**58'02 minimum elong -4921 Jul 31 j 19:53 29°**Ⅲ**22'01 0°40'04 -4929 Jun 22 j 14:15 20°**8**57'19 conjunction behind sun begin behind sun end -4929 Jun 22 j 23:39 20°**8**58'45 minimum elong -4921 Jul 31 j 19:53 29°**Ⅲ**22'01 0°40'20 retrograde -4929 Oct 08 j 12:35 25°820'59 max. Earth dist. -4921 Jul 30 j 20:51 29°**Д**18'21 19.28073 AU -4929 Dec 20 j 18:18 23°8 18'35 0°15'07 -4921 Aug 10 j 19:15 opposition min. Earth dist. -4929 Dec 21 j 22:39 23°815'29 17.30855 AU -4921 Nov 15 j 18:29 retrograde 3°9544'50 -4928 Mar 06 j 01:46 21°**8**11'48 -4920 Jan 28 j 13:36 1°5643'06 0°46'08 direct opposition min. Earth dist. -4920 Jan 29 i 10:00 1°540'55 17.28965 AU -4928 Jun 26 j 22:39 25°**8**44'23 0°15'39 conjunction -4920 Mar 15 i 09:49 30°R **I**I -4928 Jun 26 j 22:39 25°**8**44'23 minimum elong 0°15'52 direct -4920 Apr 14 j 15:40 29° **II** 36'53 -4928 Jun 26 i 22:10 25°844'19 behind sun begin -4920 May 14 i 07:44 0ಂಣ behind sun end -4928 Jun 26 i 23:08 25° \$\frac{24}{28}\$ max. Earth dist. -4928 Jun 25 j 14:17 25° \(\begin{aligned} \b -4920 Aug 04 j 21:02 4°509'20 0°42'36 conjunction -4928 Sep 26 j 05:55 minimum elong -4920 Aug 04 j 21:02 4°509'20 0°42'52 0°Π -4928 Oct 12 j 14:33 0°**I**107'35 max. Earth dist. -4920 Aug 03 j 23:00 4°505'50 19.29923 AU retrograde -4920 Nov 19 j 18:28 -4928 Oct 28 j 23:54 30°R8 retrograde 8°931'47 opposition -4928 Dec 24 j 18:44 28°805'16 0°19'39 opposition -4919 Feb 01 j 17:05 6°530'05 0°48'48 min. Earth dist. -4928 Dec 25 j 21:40 28°802'19 17.28705 AU min. Earth dist. -4919 Feb 02 j 11:54 6°928'04 17.31093 AU direct -4927 Mar 11 j 05:56 25°**8**58'27 direct -4919 Apr 19 j 19:45 4°923'59 -4927 Jun 23 j 17:47 $0^{\circ}\Pi$ -4927 Jun 30 j 19:35 0°**I**26'44 19.27809 AU -4919 Aug 09 j 21:33 8°955'43 max. Earth dist. conjunction 0°44'50 minimum elong -4919 Aug 09 j 21:33 8°955'43 0°45'05 -4927 Jul 02 j 02:30 conjunction 0°**耳**31'36 0°19'40 max. Earth dist. -4919 Aug 09 j 02:33 8°952'42 19.32335 AU minimum elong -4927 Jul 02 j 02:30 0°**Ⅲ**31'36 0°19'52 retrograde -4919 Nov 24 j 19:11 13°917'41 retrograde -4927 Oct 17 j 14:02 4°**Ⅲ**54'59 opposition -4918 Feb 06 j 20:40 11°**©**16'03 0°51'06 opposition -4927 Dec 29 j 20:10 2°**I**52'47 0°24'05 min. Earth dist. -4918 Feb 07 j 13:04 11°5014'17 17.33780 AU min. Earth dist. -4927 Dec 30 j 23:30 2°**Ⅱ**49'48 17.27149 AU direct -4918 Apr 25 j 01:04 9°9510'09 -4926 Mar 16 j 07:51 0°II46'00 -4926 Jul 05 j 23:11 5°**Ⅱ**14'40 19.26544 AU -4918 Aug 14 j 21:03 13°540'58 0°46'44 max. Earth dist. conjunction

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 33

•	omena of Uranus fr		•	/ /			age 33
	ical year style is used: Th	-					
minimum elong	-4918 Aug 14 j 21:03	13° © 40'58	0°47'01	direct	-4910 Jun 02 j 21:53	16° Ω 32'44	
max. Earth dist.	-4918 Aug 14 j 03:57	13° © 38'15	19.35319 AU				
retrograde	-4918 Nov 29 j 18:15	18° © 02'27		conjunction	-4910 Sep 20 j 13:17	20° Ω 53′01	0°50'09
opposition	-4917 Feb 12 j 00:09	16° © 00'51	0°53'03	minimum elong	-4910 Sep 20 j 13:17	20° £ 53′01	0°50'19
min. Earth dist.	-4917 Feb 12 j 14:49	15° © 59'17	17.37071 AU	max. Earth dist.	-4910 Sep 20 j 17:06	20° Ω 53'37	19.77553 AU
direct	-4917 Apr 30 j 04:09	13°955'10		retrograde	-4909 Jan 05 j 21:03		
	1917 11p1 20 j 0 1.09	13 200 10		opposition	-4909 Mar 22 j 15:54		0°55'15
conjunction	-4917 Aug 19 j 19:57	1806325100	0°48'20	min. Earth dist.	-4909 Mar 22 j 11:47		
minimum elong			0°48'34	direct	-4909 Jun 07 j 20:27		17.80046 AU
Č	-4917 Aug 19 j 19:57			unect	-4909 Juli 0/ J 20.27	21 8603 32	
max. Earth dist.	-4917 Aug 19 j 05:49		19.38913 AU		4000 0 05:05.00	250 02 422	00.4010.6
retrograde	-4917 Dec 04 j 18:15			conjunction	-4909 Sep 25 j 05:33		
opposition	-4916 Feb 17 j 03:09		0°54'38	minimum elong	-4909 Sep 25 j 05:33		
min. Earth dist.	-4916 Feb 17 j 14:45		17.40951 AU	max. Earth dist.	-4909 Sep 25 j 10:32		19.84160 AU
direct	-4916 May 04 j 09:06	18° © 39'00		retrograde	-4908 Jan 10 j 16:46	29° Ω 39'37	
				opposition	-4908 Mar 26 j 15:22	27° Ω 39'10	0°53'54
conjunction	-4916 Aug 23 j 18:04	23° © 07'43	0°49'36	min. Earth dist.	-4908 Mar 26 j 08:17	27° Ω 39'54	17.87497 AU
minimum elong	-4916 Aug 23 j 18:04	23°907'43	0°49'51	direct	-4908 Jun 11 j 19:40	25° Ω 37'01	
max. Earth dist.	-4916 Aug 23 j 06:21		19.43092 AU		•		
retrograde	-4916 Dec 08 j 16:17			conjunction	-4908 Sep 28 j 21:05	29° Ω 54'02	0°47'45
opposition	-4915 Feb 21 j 06:12		0°55'51	minimum elong	-4908 Sep 28 j 21:05	29°Ω54'02	
min. Earth dist.	-4915 Feb 21 j 16:08			max. Earth dist.	-4908 Sep 29 j 05:09		19.90838 AU
			17.43421 AU	max. Earth dist.			19.90036 AU
direct	-4915 May 09 j 11:22	23°9021'33			-4908 Sep 30 j 11:38	0° m)	
		_		retrograde	-4907 Jan 14 j 09:51	4°M)08'16	
conjunction	-4915 Aug 28 j 15:15		0°50'31	opposition	-4907 Mar 31 j 14:23	2° Mp 07'53	
minimum elong	-4915 Aug 28 j 15:15		0°50'46	min. Earth dist.	-4907 Mar 31 j 06:01	2°Mp08'45	17.94198 AU
max. Earth dist.	-4915 Aug 28 j 06:14	27° 5 47'39	19.47844 AU	direct	-4907 Jun 16 j 16:43	0° ™ 06′08	
	-4915 Oct 03 j 17:10	$0^{\circ}\Omega$					
retrograde	-4915 Dec 13 j 15:17	2° Ω 08'43		conjunction	-4907 Oct 03 j 11:24	4° ™ 21'27	0°46'08
opposition	-4914 Feb 26 j 08:51	0° Ω 07'28	0°56'41	minimum elong	-4907 Oct 03 j 11:25	4° Mp 21′27	0°46'15
min. Earth dist.	-4914 Feb 26 j 15:18	0°Ω06'47	17.50419 AU	max. Earth dist.	-4907 Oct 03 j 20:36	4° m 22'52	19.97571 AU
	-4914 Mar 01 j 07:33	30°Rூ		retrograde	-4906 Jan 19 j 04:12	8° m/34'50	
direct	-4914 May 14 j 16:08	28° © 02'49		opposition	-4906 Apr 05 j 12:32	6° Mp 34'29	0°50'15
direct	-4914 Jul 22 j 16:30	0°Ω		min. Earth dist.	-4906 Apr 05 j 01:23		18.00955 AU
	-4914 Jul 22 j 10.30	0 86					18.00933 AU
. ,.	4014.0 02:11.45	20 020102	0051107	direct	-4906 Jun 21 j 14:04	4° m 33'05	
conjunction	-4914 Sep 02 j 11:45	2° Ω 29'02	0°51'07		10060 + 00:01.06	0070 46144	004411.5
minimum elong	-4914 Sep 02 j 11:45	2° Ω 29'02	0°51'21	conjunction	-4906 Oct 08 j 01:06	8° m) 46'44	0°44'15
max. Earth dist.	-4914 Sep 02 j 05:38		19.53089 AU	minimum elong	-4906 Oct 08 j 01:06	8° Mp 46'44	0°44'22
retrograde	-4914 Dec 18 j 11:58	6° Ω 48'01		max. Earth dist.	-4906 Oct 08 j 13:33	-	20.04346 AU
opposition	-4913 Mar 03 j 11:13	4° Ω 46'54		retrograde	-4905 Jan 23 j 20:01	12° m 59'14	
min. Earth dist.	-4913 Mar 03 j 16:15	4° Ω 46'22	17.55894 AU	opposition	-4905 Apr 10 j 09:42	10° m 58'56	0°48'00
direct	-4913 May 19 j 17:24	2° Ω 42'40		min. Earth dist.	-4905 Apr 09 j 21:04	11°Mp00'14	18.07752 AU
				direct	-4905 Jun 26 j 09:14	8° m 57'54	
conjunction	-4913 Sep 07 j 07:20	7° Ω 07'30	0°51'22				
minimum elong	-4913 Sep 07 j 07:20	7° Ω 07'30	0°51'36	conjunction	-4905 Oct 12 j 13:41	13° m 09'51	0°42'07
max. Earth dist.	-4913 Sep 07 j 03:21		19.58773 AU	minimum elong	-4905 Oct 12 j 13:41	13° m)09'51	0°42'12
retrograde	-4913 Dec 23 j 10:00	11° Ω 25'46		max. Earth dist.	-4905 Oct 13 j 03:13		20.11174 AU
opposition	-4912 Mar 07 j 13:01	9° Ω 24'49	0°57'13	retrograde	-4904 Jan 28 j 12:36	17° m) 21'30	20.1117.110
min. Earth dist.	-4912 Mar 07 j 14:39		17.61749 AU	opposition	-4904 Apr 14 j 06:04	15° Mp 21'14	0°45'29
	-	$7^{\circ}\Omega 21'00$	17.01749 AU				
direct	-4912 May 23 j 20:33	/ 862100		min. Earth dist.	-4904 Apr 13 j 14:53	-	18.14617 AU
		0		direct	-4904 Jun 30 j 04:19	13° m 20'33	
conjunction	-4912 Sep 11 j 02:10		0°51'17				
minimum elong	-4912 Sep 11 j 02:10			conjunction	-4904 Oct 16 j 01:31	-	
max. Earth dist.	-4912 Sep 11 j 01:15	11° Ω 44'15	19.64786 AU	minimum elong	-4904 Oct 16 j 01:31	17° m 30'52	0°39'51
	-4912 Nov 08 j 21:55	15° Ω		max. Earth dist.	-4904 Oct 16 j 18:23	17° Mp 33'26	20.18062 AU
retrograde	-4912 Dec 27 j 05:33	16° Ω 01'55		retrograde	-4903 Feb 01 j 03:37	21° M)41'41	
	-4911 Feb 16 j 01:29	15° Ŗ Ω		min. Earth dist.	-4903 Apr 18 j 08:35	19° m 43'13	18.21534 AU
opposition	-4911 Mar 12 j 14:34	14° Ω 01'07	0°56'55	opposition	-4903 Apr 19 j 01:40	19° m 41'29	0°42'44
min. Earth dist.	-4911 Mar 12 j 14:57			direct	-4903 Jul 04 j 22:12		
direct	-4911 May 28 j 20:42				J	• -	
	-4911 Aug 25 j 07:03			conjunction	-4903 Oct 20 j 12:30	21°m49'54	0°37'13
	.,	10 00		minimum elong	-4903 Oct 20 j 12:30	-	
conjunction	4011 Can 15: 20:00	160 0 10127	0°50'53	max. Earth dist.	-4903 Oct 20 j 12:30 -4903 Oct 21 j 06:27	-	
conjunction	-4911 Sep 15 j 20:08				-		20.23014 AU
minimum elong	-4911 Sep 15 j 20:08	16° Ω 19'37	0°51'05	retrograde	-4902 Feb 05 j 18:45		0020:45
max. Earth dist.	-4911 Sep 15 j 20:51		19.71077 AU	opposition	-4902 Apr 23 j 20:22	-	
retrograde	-4910 Jan 01 j 02:33			min. Earth dist.	-4902 Apr 23 j 01:03		18.28521 AU
opposition	-4910 Mar 17 j 15:29		0°56'16	direct	-4902 Jul 09 j 14:48	21° m 59'54	
min Farth dist	-4910 Mar 17 i 12:34						

min. Earth dist.

-4910 Mar 17 j 12:34 $18^{\circ}\Omega$ 35'59 17.74302 AU

Planetary Phenomena of Uranus from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 34

Attention, astronomical year style is used: The year -4902 in astronomical counting style is the year 4903 BCE in historical counting style.

conjunction	-4902 Oct 24 j 22:54	26°M 07'03	0°34'28
minimum elong	-4902 Oct 24 j 22:54	26°M)07'03	0°34'30
max. Earth dist.	-4902 Oct 25 j 19:56	26° Mp 10'14	20.32006 AU
	-4901 Jan 16 j 01:26	0∘ ⊽	
retrograde	-4901 Feb 10 j 09:10	0° ჲ 16'18	
	-4901 Mar 08 j 03:29	30°R.Mp	
opposition	-4901 Apr 28 j 14:12	28°Mp 16'16	0°36'37
min. Earth dist.	-4901 Apr 27 j 17:02	28° Mp $18'25$	18.35504 AU
direct	-4901 Jul 14 j 07:17	26°Mp 16'49	
	-4901 Oct 23 j 02:59	0∘ ⊽	
		_	
conjunction	-4901 Oct 29 j 08:29	0° ჲ 22'27	0°31'33
conjunction minimum elong	-4901 Oct 29 j 08:29 -4901 Oct 29 j 08:29	0° ჲ 22'27 0° ჲ 22'28	0°31'33 0°31'35
	,	0° £ 22′28	
minimum elong	-4901 Oct 29 j 08:29	0° £ 22′28 0° £ 25′44	0°31'35
minimum elong max. Earth dist.	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19	0° £ 22′28 0° £ 25′44	0°31'35
minimum elong max. Earth dist. retrograde	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29	0° £ 22'28 0° £ 25'44 4° £ 30'58	0°31'35 20.38975 AU
minimum elong max. Earth dist. retrograde min. Earth dist.	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29 -4900 May 01 j 08:26	0° Ω 22'28 0° Ω 25'44 4° Ω 30'58 2° Ω 33'21	0°31'35 20.38975 AU 18.42450 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29 -4900 May 01 j 08:26 -4900 May 02 j 07:12	0° \(\Omega \) 22'28 0° \(\Omega \) 25'44 4° \(\Omega \) 30'58 2° \(\Omega \) 31'03	0°31'35 20.38975 AU 18.42450 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29 -4900 May 01 j 08:26 -4900 May 02 j 07:12	0° \(\Omega \) 22'28 0° \(\Omega \) 25'44 4° \(\Omega \) 30'58 2° \(\Omega \) 33'21 2° \(\Omega \) 31'03 0° \(\Omega \) 32'01	0°31'35 20.38975 AU 18.42450 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29 -4900 May 01 j 08:26 -4900 May 02 j 07:12 -4900 Jul 17 j 21:45	0° \$\Pi 22'28\$ 0° \$\Pi 25'44\$ 4° \$\Pi 30'58\$ 2° \$\Pi 33'21\$ 2° \$\Pi 31'03\$ 0° \$\Pi 32'01\$ 4° \$\Pi 36'13\$	0°31'35 20.38975 AU 18.42450 AU 0°33'17
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-4901 Oct 29 j 08:29 -4901 Oct 30 j 06:19 -4900 Feb 14 j 22:29 -4900 May 01 j 08:26 -4900 May 02 j 07:12 -4900 Jul 17 j 21:45	0° \$\Pi 22'28\$ 0° \$\Pi 25'44\$ 4° \$\Pi 30'58\$ 2° \$\Pi 33'21\$ 2° \$\Pi 31'03\$ 0° \$\Pi 32'01\$ 4° \$\Pi 36'13\$	0°31'35 20.38975 AU 18.42450 AU 0°33'17

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4900 in astronomical counting style is the year 4901 BCE in historical counting style. -4900 Feb 14 j 22:29 4°**£**30'58 opposition -4893 Jun 02 j 09:10 1°ML32'02 0°06'37 retrograde -4900 May 01 j 08:26 2°**2**33'21 18.42450 AU -4893 Jul 16 j 09:56 30°R ₽ min. Earth dist. -4900 May 02 j 07:12 2°**2**31'03 0°33'17 -4893 Aug 17 j 09:34 29°**£**35'10 direct opposition -4900 Jul 17 j 21:45 -4893 Sep 17 j 11:47 direct 0°£32'01 0°M -4900 Nov 01 j 17:39 4°**2**36'13 0°28'29 -4893 Nov 30 j 20:18 conjunction conjunction 3°M30'52 0°04'18 -4900 Nov 01 j 17:39 -4893 Nov 30 j 20:19 0°04'09 minimum elong 4°**△**36'13 0°28'29 minimum elong 3° M $_{3}0'52$ -4893 Nov 30 j 13:51 max. Earth dist. -4900 Nov 02 j 18:15 4°**೨**39'54 20.45872 AU behind sun begin 3°M29'57 retrograde -4899 Feb 18 j 12:06 8°**£**44'01 behind sun end -4893 Dec 01 j 02:46 3°M31'47 opposition -4899 May 06 j 23:30 6°**2**44'14 0°29'47 max. Earth dist. -4893 Dec 02 j 01:59 3°M35'11 20.86405 AU min. Earth dist. -4899 May 05 j 23:01 6°**≏**46'42 18.49278 AU retrograde -4892 Mar 19 j 14:24 7° M $_{3}4'26$ -4899 Jul 22 j 12:53 -4892 Jun 05 j 20:12 direct 4°**£**45'37 opposition 5°**™**34'57 0°02'37 min. Earth dist. -4892 Jun 04 j 15:22 5°M37'50 18.88610 AU conjunction -4899 Nov 06 j 02:03 8°**△**48'25 0°25'17 direct -4892 Aug 20 j 17:11 3°M38'13 minimum elong -4899 Nov 06 j 02:03 8°**£**48'25 0°25'16 max. Earth dist. -4899 Nov 07 j 03:09 8°**≙**52'09 20.52619 AU conjunction -4892 Dec 04 j 02:05 7°M32'59 0°00'38 retrograde -4898 Feb 23 j 00:03 12°**£**55'33 minimum elong -4892 Dec 04 j 02:04 7°M32'59 0°00'29 opposition -4898 May 11 j 15:07 10°**♀**55'52 0°26'08 behind sun begin -4892 Dec 03 j 19:31 7°M32'04 min. Earth dist. -4898 May 10 j 13:42 10°**2**58'26 18.55935 AU behind sun end -4892 Dec 04 j 08:36 7°M33'54 direct -4898 Jul 27 j 01:17 8°**≏**57'38 max. Earth dist. -4892 Dec 05 j 09:08 7°M37'29 20.90653 AU desc. node -4891 Feb 04 j 21:28 10°M43'21 conjunction -4898 Nov 10 j 10:17 12°**£**59'07 0°21'57 retrograde -4891 Mar 23 j 23:23 11°MJ36'04 minimum elong -4898 Nov 10 j 10:17 12° \$\omega\$59'07 0°21'54 min. Earth dist. -4891 Jun 09 i 00:25 9°M39'32 18.92677 AU max. Earth dist. -4898 Nov 11 i 13:34 13°**2**03'10 20.59148 AU opposition -4891 Jun 10 i 06:23 9°M36'32 0°-1'-21 retrograde -4897 Feb 27 j 12:09 17°**£**05'35 direct -4891 Aug 25 j 02:34 7°**IL**39'57 -4897 May 15 j 02:52 15° **2**08'42 18.62323 AU min. Earth dist. opposition -4897 May 16 j 05:40 15°**£**06'01 -4891 Dec 08 i 07:21 11°ML33'51 0°-3'-2 0°22'23 conjunction -4897 Jul 31 j 14:57 13° **2**08'09 -4891 Dec 08 j 07:20 11°ML33'51 0°03'14 direct minimum elong -4891 Dec 08 j 00:49 11°M232'56 behind sun begin -4891 Dec 08 j 13:52 11°M34'46 -4897 Nov 14 j 17:52 17°**♀**08'21 0°18'32 conjunction behind sun end -4897 Nov 14 j 17:52 17°**♀**08'21 0°18'28 -4891 Dec 09 j 14:03 11°M38'17 20.94545 AU max. Earth dist. minimum elong -4897 Nov 15 j 21:09 17°**2**12'23 20.65379 AU -4890 Feb 17 j 07:02 15°M ⊾ max. Earth dist. -4890 Mar 28 j 07:24 15°M36'31 -4896 Mar 02 j 23:12 21°**£**14'12 retrograde retrograde -4890 May 07 j 09:42 15°RM -4896 May 19 j 19:45 19°**2**14'42 0°18'31 opposition -4890 Jun 13 j 10:42 13°M 39'54 18.96414 AU -4896 May 18 j 16:39 19°**2**17'25 18.68395 AU min. Earth dist. min. Earth dist. -4896 Aug 04 j 01:36 17°**♀**17'09 -4890 Jun 14 j 16:02 13°M 36'58 0°-5'-19 direct opposition -4890 Aug 29 j 08:31 11°M 40'30 direct conjunction -4896 Nov 18 j 01:06 21°**2**16'08 0°15'02 -4890 Dec 02 j 18:42 15°ML -4896 Nov 18 j 01:06 21°**£**16'08 minimum elong behind sun begin -4896 Nov 17 j 22:27 21°**♀**15'46 conjunction -4890 Dec 12 j 12:40 15°MJ33'39 0°-6'-36 behind sun end -4896 Nov 18 j 03:45 21°**2**16'31 minimum elong -4890 Dec 12 j 12:39 15°M33'39 0°06'47 max. Earth dist. -4896 Nov 19 j 06:07 21°**2**20'25 20.71259 AU behind sun begin -4890 Dec 12 j 06:31 15°M32'48 -4895 Mar 07 j 09:54 25°**2**21'23 behind sun end -4890 Dec 12 j 18:48 15°M34'31 retrograde -4895 May 23 j 04:40 23°**2**24'47 18.74073 AU max. Earth dist. -4890 Dec 13 j 20:32 15°M 38'15 20.98113 AU min. Earth dist. -4895 May 24 j 09:01 23°**£**21'56 -4889 Apr 01 j 16:02 19°M35'57 opposition 0°14'36 retrograde -4889 Jun 17 j 18:26 17° ML39'26 18.99816 AU direct -4895 Aug 08 i 13:43 21°**2**24'40 min. Earth dist. -4889 Jun 19 i 00:45 17° ML36'24 opposition -4895 Nov 22 i 07:54 25° **2**22'29 0°11'29 conjunction direct -4889 Sep 02 j 16:32 15°M 40'04 minimum elong -4895 Nov 22 i 07:54 25°**£**22'29 0°11'23 behind sun begin -4895 Nov 22 i 03:04 25° **2**21'48 -4889 Dec 16 j 17:37 19°ML32'35 0°-10'-6 conjunction behind sun end -4895 Nov 22 j 12:43 25°**2**23'11 -4889 Dec 16 j 17:37 19°M32'35 0°10'18 minimum elong max. Earth dist. -4895 Nov 23 j 12:34 25° **2**26'41 20.76729 AU behind sun begin -4889 Dec 16 j 12:23 19°M31'51 -4889 Dec 16 j 22:52 19°M33'19 -4894 Mar 11 j 20:00 29° **2**27'09 behind sun end retrograde opposition -4894 May 28 j 21:32 27°**2**27'43 0°10'37 max. Earth dist. -4889 Dec 18 j 00:54 19°M37'05 21.01350 AU min. Earth dist. -4894 May 27 j 17:22 27°**2**30'32 18.79343 AU retrograde -4888 Apr 04 j 23:29 23°M34'36 direct -4894 Aug 12 j 22:55 25°**♀**30'39 min. Earth dist. -4888 Jun 21 j 03:47 21°ML38'01 19.02896 AU opposition -4888 Jun 22 j 09:16 21°M235'03 0°-13'-5 -4894 Nov 26 j 14:27 29°**2**27'24 0°07'53 direct -4888 Sep 05 j 21:18 19°MJ38'51 conjunction -4894 Nov 26 j 14:27 29°**Ω**27'24 minimum elong 0°07'48 -4894 Nov 26 j 08:32 29°**£**26'33 -4888 Dec 19 j 22:34 23°M30'51 0°-13'-32 behind sun begin conjunction behind sun end -4894 Nov 26 j 20:22 29°**Ω**28'14 minimum elong -4888 Dec 19 j 22:34 23°M 30'51 0°13'45 max. Earth dist. -4894 Nov 27 j 20:30 29°**2**31'47 20.81782 AU behind sun begin -4888 Dec 19 j 19:00 23°M30'21 -4894 Dec 05 j 22:02 0°M, behind sun end -4888 Dec 20 j 02:07 23°M31'21 retrograde -4893 Mar 16 j 05:35 3°**™**31'29 max. Earth dist. -4888 Dec 21 j 06:47 23°ML35'28 21.04260 AU min. Earth dist. -4893 Jun 01 j 03:56 1°M34'58 18.84175 AU retrograde -4887 Apr 09 j 08:11 27° ML32'38

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4887 in astronomical counting style is the year 4888 BCE in historical counting style. -4887 Jun 25 j 10:52 25°M-36'10 19.05621 AU min. Earth dist. opposition -4879 Jul 28 j 20:43 27° ₹ 12'36 0°-42'-47 -4887 Jun 26 j 17:08 25°ML33'08 0°-16'-52 min. Earth dist. -4879 Jul 27 j 22:36 27° ₹14'50 19.10058 AU opposition direct -4887 Sep 10 j 03:57 23°ML37'04 direct -4879 Oct 11 j 16:36 25° ₹ 16'29 -4887 Dec 24 j 03:32 27° ML 28'38 0°-16'-56 -4878 Jan 25 j 02:50 29°**尽** 07'59 0°-39'-50 conjunction conjunction -4887 Dec 24 j 03:31 27°M28'38 0°17'08 -4878 Jan 25 j 02:50 29°**尽**07'59 0°40'07 minimum elong minimum elong -4887 Dec 25 j 10:47 27°M33'06 21.06797 AU -4878 Jan 26 j 01:39 29° ₹ 11'13 21.09144 AU max. Earth dist. max. Earth dist. -4886 Feb 09 j 18:00 -4878 Feb 09 j 12:15 0°**∡**¹ 0°궁 1°**∡**³30′16 retrograde -4886 Apr 13 j 15:29 retrograde -4878 May 16 j 07:58 3°**る**10′02 -4886 Jun 18 j 18:06 30°RML min. Earth dist. -4878 Aug 01 j 06:29 1°る12'20 19.08192 AU min. Earth dist. -4886 Jun 29 j 19:40 29°M 33'42 19.07968 AU opposition -4878 Aug 02 j 02:07 1°る10'20 0°-45'-15 -4886 Jul 01 j 00:36 29°M30'48 -4878 Sep 02 j 01:37 opposition 0°-20'-34 30°₽**⋌** -4886 Sep 14 j 08:06 27° ML34'51 -4878 Oct 15 j 19:24 29°**х** 14′00 direct direct -4886 Dec 02 j 16:23 -4878 Nov 27 j 13:40 0°궁 conjunction -4886 Dec 28 j 08:43 1°**∡**126'07 0°-20'-14 conjunction -4877 Jan 29 j 10:07 3°る05'53 0°-41'-58 minimum elong -4886 Dec 28 j 08:43 1°**∡**¹26′07 0°20'28 minimum elong -4877 Jan 29 j 10:07 3°る05'53 0°42'14 max. Earth dist. -4886 Dec 29 j 16:24 1°**尽**30'38 21.08936 AU max. Earth dist. -4877 Jan 30 j 08:14 3°る09'01 21.07062 AU retrograde -4885 Apr 18 j 00:14 5°**∡**¹27'38 retrograde -4877 May 20 j 17:12 7°**る**08'11 3°**尽**31'10 19.09880 AU min. Earth dist. -4885 Jul 04 j 02:19 opposition -4877 Aug 06 j 07:22 5°る08'22 0°-47'-30 opposition -4885 Jul 05 j 07:37 3°**х** 28′14 0°-24'-10 min. Earth dist. -4877 Aug 05 j 12:07 5°る10'19 19.05896 AU direct -4885 Sep 18 i 13:31 1°**∡**'32'23 direct -4877 Oct 20 i 01:27 3°る11'50 conjunction -4884 Jan 01 i 13:47 5°**₹**23'26 0°-23'-26 conjunction -4876 Feb 02 i 17:32 7°る04'11 0°-43'-54 minimum elong -4884 Jan 01 i 13:46 5°**∡**123'26 0°23'40 minimum elong -4876 Feb 02 i 17:32 7°る04'11 0°44'11 max. Earth dist. -4884 Jan 02 j 20:05 5°**₹**27'45 21.10613 AU max. Earth dist. -4876 Feb 03 j 13:30 7°る07'01 21.04567 AU -4884 Apr 21 j 07:36 9°**x** 24'56 retrograde -4876 May 24 j 00:31 11°る06'47 retrograde min. Earth dist. -4884 Jul 07 j 10:58 7°**∡**728'19 19.11319 AU opposition -4876 Aug 09 j 12:50 9°**⋜**06'51 0°-49'-32 -4884 Jul 08 j 14:31 7°**₹**25'34 0°-27'-40 min. Earth dist. -4876 Aug 08 j 19:57 9°る08'35 19.03219 AU opposition -4876 Oct 23 j 04:34 -4884 Sep 21 j 17:23 5°**∡**'29'47 direct 7°る10'06 direct -4875 Feb 06 j 01:44 11° ට 03'02 0°-45'-38 -4883 Jan 04 j 19:22 9°**₹**'20'42 0°-26'-32 conjunction conjunction -4883 Jan 04 j 19:22 9°**∡**¹20'42 0°26'47 -4875 Feb 06 j 01:44 11°**궁**03'02 0°45'54 minimum elong minimum elong -4875 Feb 06 j 20:50 11°る05'44 21.01718 AU -4883 Jan 06 j 01:37 9°**₹**25'01 21.11797 AU max. Earth dist. max. Earth dist. -4875 May 28 j 09:50 15°る05'59 -4883 Apr 25 j 16:40 13°**尽** 22'12 retrograde retrograde -4883 Jul 12 j 20:56 11° ₹22'52 0°-31'-1 -4875 Aug 13 j 18:03 13°る05'58 0°-51'-20 opposition opposition -4883 Jul 11 j 17:27 11°**₹**25'38 19.12229 AU -4875 Aug 13 j 01:38 13°**궁**07'39 19.00191 AU min. Earth dist. min. Earth dist. direct -4883 Sep 25 j 22:32 9°**√**27'08 direct -4875 Oct 27 j 10:24 11°る09'00 -4874 Feb 10 j 10:24 15°**⋜**02'36 0°-47'-9 conjunction -4882 Jan 09 j 01:05 13° ₹ 18'00 0°-29'-30 conjunction -4874 Feb 10 j 10:24 15°**⋜**02'36 0°47'25 minimum elong -4882 Jan 09 j 01:05 13° **₹** 18'00 0°29'45 minimum elong max. Earth dist. -4882 Jan 10 j 05:24 13° ₹22'02 21.12420 AU max. Earth dist. -4874 Feb 11 j 03:07 15°る04'59 20.98518 AU retrograde -4882 Apr 29 j 23:53 17° **₹** 19'33 retrograde -4874 Jun 01 j 18:08 19°**⋜**05'59 min. Earth dist. -4882 Jul 16 j 02:03 15° ₹ 22'45 19.12563 AU -4874 Aug 17 j 23:38 17°る05'53 0°-52'-54 opposition -4882 Jul 17 j 03:20 15° ₹20'12 0°-34'-13 min. Earth dist. -4874 Aug 17 j 09:46 17°る07'19 18.96826 AU opposition -4882 Sep 30 i 02:03 13° ₹24'27 -4874 Oct 31 j 14:08 15°る08'42 direct direct -4881 Jan 13 i 07:14 17° ₹ 15'22 0°-32'-20 -4873 Feb 14 i 19:40 19°る03'05 0°-48'-27 conjunction conjunction -4881 Jan 13 j 07:14 17° ₹ 15'22 0°32'36 -4873 Feb 14 j 19:40 19°る03'05 0°48'43 minimum elong minimum elong -4881 Jan 14 i 10:59 17° ₹ 19'19 21.12457 AU max. Earth dist. max. Earth dist. -4873 Feb 15 i 11:16 19°**⋜**05'18 20.94994 AU retrograde -4881 May 04 j 09:22 21° ₹ 16'59 retrograde -4873 Jun 06 j 04:09 23°る06'57 min. Earth dist. -4881 Jul 20 j 08:18 19° ₹20'06 19.12292 AU opposition -4873 Aug 22 j 05:12 21°る06'48 0°-54'-13 -4881 Jul 21 j 09:13 19° **₹**17'36 0°-37'-15 min. Earth dist. -4873 Aug 21 j 15:56 21°る08'10 18.93128 AU opposition -4881 Oct 04 j 07:37 17° ₹21'46 -4873 Nov 04 j 19:56 19°る09'24 direct direct conjunction -4880 Jan 17 j 13:26 21°**х** 12'48 0°-35'00 conjunction -4872 Feb 19 j 05:32 23°る04'40 0°-49'-31 minimum elong -4880 Jan 17 j 13:26 21° ₹ 12'48 0°35'16 minimum elong -4872 Feb 19 j 05:32 23°**중**04'40 0°49'47 -4880 Jan 18 j 15:03 21° ₹ 16'26 21.11894 AU max. Earth dist. -4872 Feb 19 j 18:40 23°る06'32 20.91131 AU max. Earth dist. retrograde -4880 May 07 j 15:53 25° ₹ 14'31 retrograde -4872 Jun 09 j 13:14 27°る09'04 -4880 Jul 24 j 15:10 23°**⊀** 15'03 0°-40'-7 -4872 Aug 25 j 11:11 25°る08'52 0°-55'-17 opposition opposition -4880 Jul 23 j 16:37 23° ₹ 17'20 19.11445 AU -4872 Aug 25 j 00:40 25°**궁**09'58 18.89096 AU min. Earth dist. min. Earth dist. -4880 Oct 07 j 10:38 21°**尽** 19'06 -4872 Nov 08 j 00:28 23°る11'15 direct direct conjunction -4879 Jan 20 j 19:58 25° **₹** 10'19 0°-37'-30 conjunction -4871 Feb 22 j 16:17 27°る07'30 0°-50'-21 minimum elong -4879 Jan 20 j 19:58 25° ₹ 10'19 0°37'46 minimum elong -4871 Feb 22 j 16:17 27°る07'30 0°50'37

max. Earth dist.

-4871 Feb 23 j 03:54 27°る09'09 20.86932 AU

-4871 Apr 19 j 09:01

max. Earth dist.

retrograde

-4879 Jan 21 j 20:59 25° ₹ 13'52 21.10780 AU

-4879 May 12 j 01:34 29° ₹ 12'11

2	nical year style is used: The			. //		, 1	
retrograde	-4871 Jun 14 j 00:34	1°≈12'30			-4863 Mar 22 j 20:05	0°) €	
	-4871 Aug 09 j 22:20	30°R₹			,		
opposition	-4871 Aug 29 j 17:20	29° ට 12'16	0°-56'-4	conjunction	-4863 Mar 29 j 10:19	0°) 23′05	0°-47'-31
min. Earth dist.	-4871 Aug 29 j 07:48	29° ප 13'15	18.84701 AU	minimum elong	-4863 Mar 29 j 10:20	0°) 23′05	0°47'41
direct	-4871 Nov 12 j 07:02	27° ට 14'24		max. Earth dist.	-4863 Mar 29 j 01:37	0° ∺ 21'49	20.39784 AU
	-4870 Feb 05 j 23:13	0° ≈		retrograde	-4863 Jul 18 j 03:09	4°) 33'44	
	v			opposition	-4863 Oct 01 j 10:00	2° ₩ 32'33	0°-51'-52
conjunction	-4870 Feb 27 j 03:49	1° ≈ 11'43	0°-50'-56	min. Earth dist.	-4863 Oct 01 j 17:36	2°) 31'45	18.36309 AU
minimum elong	-4870 Feb 27 j 03:49	1° ≈ 11'43	0°51'10	direct	-4863 Dec 15 j 04:53	0°) 31′39	
max. Earth dist.	-4870 Feb 27 j 12:36	1° ≈ 12'58	20.82336 AU				
retrograde	-4870 Jun 18 j 10:26	5°≈17'20		conjunction	-4862 Apr 03 j 04:05	4°) (39′35	0°-45'-57
opposition	-4870 Sep 02 j 23:54	3° ≈ 17'04	0°-56'-35	minimum elong	-4862 Apr 03 j 04:06	4°) (39′35	0°46'06
min. Earth dist.	-4870 Sep 02 j 17:30	3° ≈ 17'44	18.79906 AU	max. Earth dist.	-4862 Apr 02 j 17:21	4°) €38'01	20.32813 AU
direct	-4870 Nov 16 j 12:24	1° ≈ 18'57		retrograde	-4862 Jul 22 j 16:48	8°) ₹51'03	
				opposition	-4862 Oct 05 j 20:26	6°) 49′43	0°-50'00
conjunction	-4869 Mar 03 j 16:12	5°≈17'24	0°-51'-15	min. Earth dist.	-4862 Oct 06 j 06:36	6°) 48′38	18.29323 AU
minimum elong	-4869 Mar 03 j 16:12	5° ≈ 17'24	0°51'29	direct	-4862 Dec 19 j 15:23	4°){ 48′24	
max. Earth dist.	-4869 Mar 03 j 22:57	5° ≈ 18'22	20.77343 AU				
retrograde	-4869 Jun 22 j 22:57	9° ≈ 23'42		conjunction	-4861 Apr 07 j 22:36	8° 升 57'53	0°-44'-7
opposition	-4869 Sep 07 j 06:51	7° ≈ 23'21	0°-56'-48	minimum elong	-4861 Apr 07 j 22:36	8° ¥ 57'53	0°44'15
min. Earth dist.	-4869 Sep 07 j 01:39	7° ≈ 23'54	18.74695 AU	max. Earth dist.	-4861 Apr 07 j 09:21	8° ¥ 55'57	20.25834 AU
direct	-4869 Nov 20 j 20:28	5° ≈ 24'56		retrograde	-4861 Jul 27 j 09:34		
	,			opposition	-4861 Oct 10 j 07:28	11°) €08'44	0°-47'-50
conjunction	-4868 Mar 07 j 05:11	9° ≈ 24'34	0°-51'-19	min. Earth dist.	-4861 Oct 10 j 18:33	11°) €07'33	18.22356 AU
minimum elong	-4868 Mar 07 j 05:11	9° ≈ 24'34	0°51'32	direct	-4861 Dec 24 j 04:38	9° ₩ 07'00	
max. Earth dist.	-4868 Mar 07 j 08:58	9° ≈ 25'07	20.71914 AU		J		
retrograde	-4868 Jun 26 j 09:22	13° ≈ 31'33		conjunction	-4860 Apr 11 j 17:57	13°) 18′05	0°-42'-2
opposition	-4868 Sep 10 j 14:24	11° ≈ 31'07	0°-56'-44	minimum elong	-4860 Apr 11 j 17:57		
min. Earth dist.	-4868 Sep 10 j 12:24		18.69057 AU	max. Earth dist.	-4860 Apr 11 j 03:08		
direct	-4868 Nov 24 j 02:49	9° ≈ 32'21		retrograde	-4860 Jul 31 j 00:54		
		,		opposition	-4860 Oct 13 j 19:22		0°-45'-23
conjunction	-4867 Mar 11 j 19:10	13°≈33'14	0°-51'-6	min. Earth dist.	-4860 Oct 14 j 08:48		
minimum elong	-4867 Mar 11 j 19:11			direct	-4860 Dec 27 j 16:24		
max. Earth dist.	-4867 Mar 11 j 20:34					7,1=,0,	
man. Darvir dige.	-4867 Apr 06 j 09:38		20.00000110	conjunction	-4859 Apr 16 j 14:15	17° ¥ 40'17	0°-39'-41
retrograde	-4867 Jun 30 j 22:50			minimum elong	-4859 Apr 16 j 14:15		
opposition	-4867 Sep 14 j 22:04		0°-56'-22	max. Earth dist.	-4859 Apr 15 j 20:41		
min. Earth dist.	-4867 Sep 14 j 21:25			retrograde	-4859 Aug 04 j 19:21		
min. Eurin Gigt.	-4867 Oct 01 j 07:03		10.03027110	opposition	-4859 Oct 18 j 07:49		0°-42'-39
direct	-4867 Nov 28 j 12:47			min. Earth dist.	-4859 Oct 18 j 22:24		
	-4866 Jan 23 j 23:45			direct	-4858 Jan 01 j 07:15		10.000, 1110
	,			3		-, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
conjunction	-4866 Mar 16 j 09:54	17° ≈ 43'24	0°-50'-37	conjunction	-4858 Apr 21 j 11:33	22° ₩ 04'35	0°-37'-5
minimum elong	-4866 Mar 16 j 09:54	17° ≈ 43'24	0°50'49	minimum elong	-4858 Apr 21 j 11:33		
max. Earth dist.	-4866 Mar 16 j 08:26		20.59878 AU	max. Earth dist.	-4858 Apr 20 j 16:43		20.05168 AU
retrograde	-4866 Jul 05 j 09:41	21° ≈ 51'47		retrograde	-4858 Aug 09 j 12:21	26°) 19′25	
opposition	-4866 Sep 19 j 06:26		0°-55'-41	opposition	-4858 Oct 22 j 21:20	24°) €17'48	0°-39'-39
min. Earth dist.	-4866 Sep 19 j 08:54			min. Earth dist.	-4858 Oct 23 j 14:09		
direct	-4866 Dec 02 j 20:26			direct	-4857 Jan 05 j 20:48		
	<i>j</i> v			max. Earth dist.	-4857 Apr 25 j 11:40		19.98426 AU
conjunction	-4865 Mar 21 j 01:12	21°≈55'03	0°-49'-51		r - j		
minimum elong	-4865 Mar 21 j 01:12		0°50'02	conjunction	-4857 Apr 26 j 09:23	26° ∺ 30'59	0°-34'-14
max. Earth dist.	-4865 Mar 20 j 21:22		20.53382 AU	minimum elong	-4857 Apr 26 j 09:23	26° ∺ 30'59	0°34'17
retrograde	-4865 Jul 09 j 23:53	26°≈04'11			-4857 Jul 02 j 22:09	0° Υ	
opposition	-4865 Sep 23 j 15:04	24° ≈ 03'18	0°-54'-43	retrograde	-4857 Aug 14 j 07:56	0° Υ 46'42	
min. Earth dist.	-4865 Sep 23 j 18:42				-4857 Sep 26 j 05:49	30° ₹	
direct	-4865 Dec 07 j 07:38		-	opposition	-4857 Oct 27 j 11:36	28°) 45′01	0°-36'-22
				min. Earth dist.	-4857 Oct 28 j 05:45		17.95085 AU
conjunction	-4864 Mar 24 j 17:22	26° ≈ 08'16	0°-48'-49	direct	-4856 Jan 10 j 13:35	26°) 41'49	
minimum elong	-4864 Mar 24 j 17:22	26°≈08'16			-4856 Apr 13 j 16:41	0°Υ	
max. Earth dist.	-4864 Mar 24 j 11:07		20.46652 AU	max. Earth dist.	-4856 Apr 29 j 09:37		19.91739 AU
	-4864 Jun 16 j 21:13	0° \					, 110
retrograde	-4864 Jul 13 j 11:56	0° ₩ 18'08		conjunction	-4856 Apr 30 j 08:25	0° Υ 59'31	0°-31'-9
- · · · · · · · · · · · · · · · · · · ·	-4864 Aug 09 j 08:47	30°R≈		minimum elong	-4856 Apr 30 j 08:25	0° Υ 59'31	0°31'11
opposition	-4864 Sep 27 j 00:18	28°≈17'06	0°-53'-26	retrograde	-4856 Aug 18 j 02:06	5°Υ16'02	
min. Earth dist.	-4864 Sep 27 j 06:49		18.43232 AU	opposition	-4856 Oct 31 j 02:43		0°-32'-50
direct	-4864 Dec 10 j 16:46			min. Earth dist.	-4856 Oct 31 j 22:58		17.88429 AU
					,		-

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4855 in astronomical counting style is the year 4856 BCE in historical counting style. 1°Y10'45 conjunction direct -4855 Jan 14 i 05:40 -4848 Jun 07 j 21:09 7°**8**51'03 0°00'-36 -4855 May 04 j 06:09 5°**Υ**26'08 19.85116 AU minimum elong -4848 Jun 07 j 21:10 7°**8**51'03 0°00'28 max. Earth dist. -4848 Jun 07 j 14:26 7°850'02 behind sun begin -4848 Jun 08 j 03:54 7°**8**52'04 -4855 May 05 j 08:07 5°**Υ**'30'03 0°-27'-52 behind sun end conjunction -4855 May 05 j 08:07 minimum elong 5°**Y**30'03 -4848 Jun 06 j 12:26 7°**8**45'59 19.44514 AU 0°27'52 max. Earth dist. -4855 Aug 22 j 22:18 9°Υ47'22 -4848 Jul 31 j 17:34 10°**8**53'46 retrograde asc. node -4855 Nov 04 j 18:46 7°**Y**45'33 0°-29'-4 -4848 Sep 24 j 02:26 12°**8**12'40 opposition retrograde 7°**Υ**43'12 17.81849 AU -4848 Dec 06 j 09:28 min. Earth dist. -4855 Nov 05 j 16:31 opposition 10°**8**10'17 -4848 Dec 07 j 13:12 10°807'15 17.42407 AU direct -4854 Jan 19 j 00:30 5°**Y**41'38 min. Earth dist. max. Earth dist. -4854 May 09 j 05:52 9°**Y**58′28 19.78569 AU direct -4847 Feb 20 j 11:43 8°**8**04'01 max. Earth dist. -4847 Jun 11 j 15:11 12°**8**28'46 19.40366 AU -4854 May 10 j 08:34 10°**Υ**02'31 conjunction 0°-24'-22 -4854 May 10 j 08:34 10°**Υ**02'31 minimum elong 0°24'22 conjunction -4854 Aug 27 j 17:39 -4847 Jun 13 j 00:26 12°**8**33'57 retrograde 14°**Y**20′33 minimum elong 0°03'48 opposition -4854 Nov 09 j 11:42 12°**Υ**18'40 0°-25'-6 behind sun begin -4847 Jun 12 j 17:45 12°**8**32'56 min. Earth dist. -4854 Nov 10 j 11:00 12°**Υ**16'08 17.75358 AU behind sun end -4847 Jun 13 j 07:07 12°**8**34'58 direct -4853 Jan 23 j 19:34 10°**Υ**14'22 -4847 Jul 24 j 05:17 15°**8** max. Earth dist. -4853 May 14 j 03:56 14°**Υ**32'15 19.72157 AU retrograde -4847 Sep 29 j 01:00 16°856'00 -4847 Dec 08 j 21:35 15°R8 conjunction -4853 May 15 j 09:30 14°**Υ**36'45 0°-20'-43 opposition -4847 Dec 11 j 07:58 14°**8**53'37 minimum elong -4853 May 15 j 09:30 14°**Υ**36'45 0°20'41 min. Earth dist. -4847 Dec 12 j 12:31 14°\(250'30\) 17.38560 AU retrograde -4853 Sep 01 i 14:00 18° Υ55'31 direct -4846 Feb 25 i 11:42 12°847'11 opposition -4853 Nov 14 j 05:19 16°**Υ**53'31 0°-20'-56 -4846 May 10 i 13:39 15°8 min. Earth dist. $-4853 \text{ Nov } 15 \text{ j } 06:05 \quad 16^{\circ} \Upsilon 50'49$ 17.69046 AU max. Earth dist. -4846 Jun 16 j 19:02 17°8 12'56 19.36816 AU direct -4852 Jan 28 i 15:49 14° γ′48'49 max. Earth dist. -4852 May 18 j 05:18 19° Υ 08'07 19.65943 AU -4846 Jun 18 j 03:44 17°**8**18'02 0°07'49 conjunction -4846 Jun 18 j 03:43 17°**8**18'02 0°07'59 minimum elong $-4852 \text{ May } 19 \text{ i } 11:08 \quad 19^{\circ} \Upsilon 12'40 \quad 0^{\circ} - 16' - 54$ -4846 Jun 17 j 21:43 17°**8**17'07 conjunction behind sun begin -4852 May 19 j 11:08 19°**Υ**12'40 -4846 Jun 18 j 09:44 17°**8**18'57 0°16'51 behind sun end minimum elong -4852 Sep 05 j 10:53 23°**Y**32'05 -4846 Oct 04 j 01:43 21°840'28 retrograde retrograde -4852 Nov 17 j 23:49 21°**Υ**29'59 0°-16'-37 opposition opposition -4852 Nov 19 j 01:32 21°**Υ**27'11 17.62950 AU -4846 Dec 17 j 10:26 19°\(\arrow\) 35'10 17.35301 AU min. Earth dist. min. Earth dist. -4851 Feb 01 j 13:32 19°**Υ**24'56 -4845 Mar 02 j 13:45 17°**8**31'37 direct direct -4851 May 23 j 05:01 23°**Υ**45'14 19.59990 AU -4845 Jun 21 j 23:02 21°858'14 19.33851 AU max. Earth dist. max. Earth dist. -4851 May 24 j 13:07 23°**Υ**50'09 0°-12'-57 -4845 Jun 23 j 07:18 22°**8**03'17 0°11'57 conjunction conjunction -4851 May 24 j 13:07 23°**Υ**50'09 -4845 Jun 23 j 07:17 22°**8**03'17 minimum elong 0°12'53 minimum elong 0°12'08 behind sun begin -4851 May 24 j 09:04 23°**Υ**49'33 behind sun begin -4845 Jun 23 j 02:48 22°**8**02'36 behind sun end -4851 May 24 j 17:10 23°**Υ**50'45 behind sun end -4845 Jun 23 j 11:47 22°**8**03'59 retrograde -4851 Sep 10 j 07:31 28°**Υ**10'11 retrograde -4845 Oct 09 j 01:35 26°**8**26'03 opposition -4851 Nov 22 j 19:04 26°**Υ**07'59 0°-12'-10 opposition min. Earth dist. -4851 Nov 23 j 22:07 26°**Υ**05'02 17.57170 AU min. Earth dist. -4845 Dec 22 j 11:00 24°\(\colon\)20'44 17.32637 AU -4850 Feb 06 j 11:21 24°**Υ**02'34 -4844 Mar 06 j 14:34 22°**8**17'12 direct direct max. Earth dist. -4850 May 28 j 07:44 28°**Υ**24'12 19.54387 AU max. Earth dist. -4844 Jun 26 j 02:55 26°844'32 19.31475 AU -4850 May 29 j 15:36 28°**Υ**29'06 0°-8'-55 -4844 Jun 27 i 10:56 26° \$\frac{2}{4}9'35 0°16'01 conjunction conjunction -4850 May 29 j 15:36 28°**γ**29'06 -4844 Jun 27 j 10:56 26°**8**49'34 minimum elong 0°08'49 minimum elong 0°16'13 -4850 May 29 j 09:48 28°**Υ**28'14 behind sun begin -4844 Aug 22 i 09:43 $\Pi^{\circ}0$ -4850 May 29 j 21:24 28°**Υ**29'58 behind sun end retrograde -4844 Oct 13 i 03:02 1°**Ⅱ**12'36 -4850 Jun 23 i 16:39 0°8 -4844 Dec 05 i 19:15 30°R8 -4850 Sep 15 j 05:42 2°849'42 -4844 Dec 25 j 07:16 29°810'27 0°20'03 retrograde opposition -4850 Nov 27 j 15:09 0°847'25 0°-7'-38 min. Earth dist. -4844 Dec 26 j 10:09 29°807'31 17.30530 AU opposition min. Earth dist. -4850 Nov 28 j 18:21 0°**8**44'27 17.51767 AU direct -4843 Mar 11 j 17:48 27°**8**03'49 -4850 Dec 16 j 04:20 30°R℃ -4843 Jun 06 j 11:26 $\Pi^{\circ}0$ -4849 Feb 11 j 11:14 28°**Υ**41'41 direct max. Earth dist. -4843 Jul 01 j 07:46 1°**Д**31'53 19.29628 AU -4849 Apr 08 j 04:42 0°X max. Earth dist. -4849 Jun 02 j 08:55 3°**8**04'17 19.49201 AU conjunction -4843 Jul 02 j 14:38 1°**II**36'45 0°20'00 -4843 Jul 02 j 14:37 1°**Ⅱ**36'45 0°20'14 minimum elong -4849 Jun 03 j 18:07 3°809'25 0°-4'-49 -4843 Oct 18 j 03:08 5°**Ⅱ**59'57 conjunction retrograde -4849 Jun 03 j 18:08 3°**8**09'25 0°04'43 -4843 Dec 30 j 08:35 3°**Ц**57'53 0°24'27 minimum elong opposition -4849 Jun 03 j 11:31 3°**8**08'25 -4843 Dec 31 j 12:00 behind sun begin min. Earth dist. 3°**Д**54'54 17.28951 AU behind sun end -4849 Jun 04 j 00:44 3°**8**10'25 direct -4842 Mar 16 j 20:14 1°**Ⅲ**51'15 retrograde -4849 Sep 20 j 02:58 7°**8**30'34 max. Earth dist. -4842 Jul 06 j 11:19 6°**Ⅱ**19'41 19.28309 AU opposition -4849 Dec 02 j 12:01 5°**8**28'13 0°-3'00 min. Earth dist. -4849 Dec 03 j 16:18 5°**8**25'07 17.46831 AU conjunction -4842 Jul 07 j 18:08 6°**I**I24'34 0°23'52 -4848 Feb 16 j 10:18 3°**8**22'10 -4842 Jul 07 j 18:08 6°**Ⅲ**24'34 0°24'05 direct minimum elong retrograde -4842 Oct 23 j 04:20 10°**Д**47'52

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4841 in astronomical counting style is the year 4842 BCE in historical counting style. opposition -4841 Jan 04 i 10:17 8°**Д**45'52 0°28'40 -4833 Feb 12 j 10:02 17°\$00'23 0°52'57 opposition -4841 Jan 05 j 12:09 8°**П**43'03 17.27885 AU min. Earth dist. -4833 Feb 13 j 00:35 16°558'49 17.38078 AU min. Earth dist. 6°**Ⅲ**39'15 -4841 Mar 22 j 00:54 -4833 Apr 30 j 15:03 14°554'39 direct direct -4841 Jul 12 j 21:32 11° $\mathbf{\Pi}$ 12'47 0°27'33 conjunction conjunction -4833 Aug 20 j 06:10 19°524'12 0°48'13 -4841 Jul 12 j 21:31 11°**Ⅲ**12'47 0°27'47 minimum elong minimum elong -4833 Aug 20 j 06:10 19°524'12 0°48'29 -4841 Jul 11 j 16:30 11°**Д**08'11 19.27483 AU -4833 Aug 19 j 15:59 19°521'57 max. Earth dist. max. Earth dist. 19.39930 AU -4841 Oct 28 j 04:21 15°**II**36'05 -4833 Dec 05 j 03:34 23°544'48 retrograde retrograde -4832 Feb 17 j 12:57 21°543'17 opposition -4840 Jan 09 j 12:37 13°**Ⅲ**34'09 0°32'41 opposition 0°54'30 min. Earth dist. -4840 Jan 10 j 14:38 13°**Ц**31'20 17.27301 AU min. Earth dist. -4832 Feb 18 j 00:36 21°542'03 17.41976 AU direct -4840 Mar 26 j 05:22 11°**Ⅲ**27'35 direct -4832 May 04 j 19:28 19°537'53 -4840 Jul 15 j 19:32 15°**I**I56'32 19.27147 AU max. Earth dist. conjunction -4832 Aug 24 j 04:05 24°506'22 0°49'27 conjunction -4840 Jul 17 j 00:34 16°**Ⅲ**01'08 0°31'03 minimum elong -4832 Aug 24 j 04:05 24°506'22 0°49'41 minimum elong -4840 Jul 17 j 00:34 16°**Ц**01'08 0°31'18 max. Earth dist. -4832 Aug 23 j 16:05 24°504'29 19.44119 AU retrograde -4840 Nov 01 j 04:47 20°**Ⅲ**24'22 retrograde -4832 Dec 09 j 01:26 28°526'26 opposition -4839 Jan 13 j 15:08 18°**Ц**22'28 0°36'29 opposition -4831 Feb 21 j 15:47 26°525'03 0°55'40 min. Earth dist. -4839 Jan 14 j 15:28 18°**Ⅲ**19'50 17.27210 AU min. Earth dist. -4831 Feb 22 j 01:45 26°524'00 17.46441 AU direct -4839 Mar 31 j 11:15 16°**Ⅲ**15'56 direct -4831 May 09 j 21:16 24°\$20'02 max. Earth dist. -4839 Jul 21 j 00:46 20°**Д**45'09 19.27303 AU conjunction -4831 Aug 29 j 01:15 28°5647'22 0°50'21 conjunction -4839 Jul 22 j 03:24 20°**II**49'23 0°34'20 minimum elong -4831 Aug 29 i 01:15 28°547'22 0°50'35 minimum elong -4839 Jul 22 i 03:23 20°**Ⅱ**49'23 0°34'34 max. Earth dist. -4831 Aug 28 i 16:04 28°\$45'55 19.48848 AU retrograde -4839 Nov 06 i 04:40 25°**Ⅱ**12'26 -4831 Sep 17 j 10:42 $0^{\circ}\Omega$ opposition -4838 Jan 18 j 18:12 23°**Ⅲ**10'35 0°40'01 retrograde -4831 Dec 14 j 01:19 3°₽06'50 min. Earth dist. -4838 Jan 19 j 17:59 23°**Д**08'01 17.27614 AU -4830 Feb 26 j 18:18 1°Ω05'37 0°56'28 opposition -4838 Apr 05 j 16:31 21°**Д**04'06 min. Earth dist. -4830 Feb 27 j 01:03 1°**Ω**04'54 17.51395 AU direct max. Earth dist. -4838 Jul 26 j 03:12 25°**Д**33'05 19.27973 AU -4830 Mar 26 j 01:11 30°R 55 -4830 May 15 j 01:08 29°501'00 direct -4830 Jul 02 j 02:33 -4838 Jul 27 j 05:22 25°**Ⅲ**37'14 0°37'22 conjunction 0 $^{\circ}\Omega$ -4838 Jul 27 j 05:22 25°**Ц**37'14 0°37'38 minimum elong -4838 Nov 09 j 18:28 0°ഇ -4830 Sep 02 j 21:34 3°**Ω**27'06 0°50'54 conjunction -4838 Nov 11 j 05:00 0°900'04 -4830 Sep 02 j 21:34 minimum elong 3°**Ω**27'06 0°51'08 retrograde -4830 Sep 02 j 14:58 -4838 Nov 12 j 15:42 30°RⅡ 3°**Ω**26'04 19.54022 AU max. Earth dist. -4837 Jan 23 j 21:16 27°**Ⅲ**58'13 0°43'15 -4830 Dec 18 j 21:50 7°**Ω**45'56 opposition retrograde -4837 Jan 24 j 19:16 27°**Д**55'51 17.28553 AU -4829 Mar 03 j 20:37 5°**Ω**44'53 0°56'53 min. Earth dist. opposition -4837 Apr 10 j 22:04 25° **I** 51'49 -4829 Mar 04 j 02:01 5°**Ω**44'19 17.56771 AU direct min. Earth dist. -4837 Jul 25 j 20:35 0ಂತಾ direct -4829 May 20 j 02:12 3°**Ω**40'42 max. Earth dist. -4837 Jul 31 j 07:46 0°520'49 19.29183 AU conjunction -4829 Sep 07 j 17:11 8°Ω05'27 0°51'08 conjunction -4837 Aug 01 j 07:02 0°524'30 0°40'08 minimum elong -4829 Sep 07 j 17:11 8° Ω05'27 0°51'20 -4837 Aug 01 j 07:02 0°9524'30 0°40'23 max. Earth dist. -4829 Sep 07 j 12:46 8° **Ω**04'46 19.59580 AU minimum elong -4837 Nov 16 j 04:45 4°9546'58 -4829 Dec 23 j 20:27 12°Ω23'36 retrograde retrograde -4836 Jan 29 j 00:23 2°545'11 0°46'11 -4828 Mar 07 j 22:16 $10^{\circ}\Omega$ 22'43 $0^{\circ}56'56$ opposition opposition -4836 Jan 29 j 21:05 2°542'57 17.30030 AU min. Earth dist. -4828 Mar 08 j 00:27 10°**Ω**22'29 17.62478 AU min. Earth dist. direct -4836 Apr 15 i 03:00 0°938'52 direct $-4828 \text{ May } 24 \text{ i } 05:34 \qquad 8^{\circ} \Omega 18'58$ max. Earth dist. -4836 Aug 04 j 09:38 5°507'26 19.30954 AU $-4828 \text{ Sep } 11 \text{ i } 12:04 \quad 12^{\circ} \Omega 42'19 \quad 0^{\circ}51'01$ conjunction conjunction -4836 Aug 05 i 07:55 5°9510'58 0°42'37 minimum elong $-4828 \text{ Sep } 11 \text{ i } 12:04 \quad 12^{\circ} \Omega 42'19 \quad 0^{\circ} 51'13$ -4836 Aug 05 j 07:54 5°910'58 0°42'52 max. Earth dist. -4828 Sep 11 j 10:25 12°Ω42'03 19.65428 AU minimum elong -4836 Nov 20 j 04:40 9°933'03 -4828 Oct 20 j 00:30 15°Ω retrograde -4835 Feb 02 i 03:39 7°931'16 0°48'47 retrograde -4828 Dec 27 j 15:28 16° Ω59'45 opposition 7°ട്ട29'15 17.32101 AU min. Earth dist. -4835 Feb 02 j 22:27 -4827 Mar 12 j 23:51 14° **Ω**59'01 0°56'36 opposition direct -4835 Apr 20 j 07:26 5°925'05 -4827 Mar 12 j 14:23 15°RΩ min. Earth dist. -4827 Mar 13 j 00:50 $14^{\circ}\Omega$ 58'55 17.68456 AU -4835 Aug 10 j 08:03 conjunction 9°556'27 0°44'48 direct -4827 May 29 j 05:36 12°**Ω**55'41 -4835 Aug 10 j 08:03 minimum elong 9°956'27 0°45'04 -4827 Aug 08 j 15:50 15°**Ω** -4835 Aug 09 j 13:02 9°553'26 19.33326 AU max. Earth dist. -4835 Nov 25 j 04:33 14°9518'05 -4827 Sep 16 j 05:57 $17^{\circ}\Omega 17'32$ 0°50'35 retrograde conjunction -4834 Feb 07 j 06:58 12°516'22 0°51'03 -4827 Sep 16 j 05:57 $17^{\circ}\Omega 17'32$ 0°50'45 opposition minimum elong -4827 Sep 16 j 06:05 17° Ω 17'33 19.71521 AU min. Earth dist. -4834 Feb 07 j 23:26 12°514'36 17.34771 AU max. Earth dist. direct -4834 Apr 25 j 12:10 10°510'23 retrograde -4826 Jan 01 j 12:51 21°Ω34'13 opposition -4826 Mar 18 j 00:43 $19^{\circ}\Omega$ 33'36 $0^{\circ}55'55$ conjunction -4834 Aug 15 j 07:28 14°540'53 0°46'40 min. Earth dist. -4826 Mar 17 j 22:26 19° **Ω** 33'50 17.74637 AU minimum elong -4834 Aug 15 j 07:28 14°540'53 0°46'55 direct -4826 Jun 03 j 07:24 17°**Ω**30'40 -4834 Aug 14 j 14:09 14°538'08 19.36313 AU max. Earth dist. retrograde -4834 Nov 30 j 03:35 19°502'01 -4826 Sep 20 j 23:12 21° Ω50'59 0°49'49 conjunction

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4826 in astronomical counting style is the year 4827 BCE in historical counting style. -4826 Sep 20 j 23:12 21° **Ω**50'59 0°49'59 minimum elong -4818 Oct 25 i 08:32 27° m 04'55 0°34'05 minimum elong max. Earth dist. -4826 Sep 21 j 02:14 21°Ω51'27 19.77779 AU max. Earth dist. -4818 Oct 26 j 05:28 27° mp 08'04 20.31883 AU -4825 Jan 06 j 06:22 $26^{\circ}\Omega$ 06'52 -4818 Dec 17 j 22:08 0∘**⊽** retrograde -4817 Feb 10 j 17:30 1°**£**14'09 opposition retrograde -4817 Apr 09 j 14:56 -4825 Mar 22 j 21:36 $24^{\circ}\Omega$ 06'42 17.80968 AU min. Earth dist. 30°R, Mp -4825 Jun $08 \text{ j } 06:03 \quad 22^{\circ} \Omega 03'49$ -4817 Apr 28 j 22:57 29° m 14'09 0°36'09 direct opposition -4817 Apr 28 j 02:01 min. Earth dist. 29° m 16'17 18.35401 AU -4825 Sep 25 j 15:27 26° Ω22'31 0°48'45 -4817 Jul 14 j 16:20 27° m/14'42 conjunction direct -4825 Sep 25 j 15:27 $26^{\circ}\Omega$ 22'31 $0^{\circ}48'55$ -4817 Oct 07 j 01:37 0∘<u>ଫ</u> minimum elong -4825 Sep 25 j 19:51 26° **Ω**23'12 19.84177 AU max. Earth dist. -4825 Dec 04 j 08:57 0° M conjunction -4817 Oct 29 j 18:14 1°**≏**20'25 0°31'08 -4824 Jan 11 j 02:12 -4817 Oct 29 j 18:14 retrograde 0°m/37'34 minimum elong 1°**₽**20'26 0°31'08 -4824 Feb 19 j 04:38 -4817 Oct 30 j 15:50 30°Ŗ**Ω** max. Earth dist. 1°**£**23'40 20.38889 AU opposition -4824 Mar 27 j 00:27 28°**Ω**37'08 0°53'30 retrograde -4816 Feb 15 j 08:14 5°**£**28'56 opposition min. Earth dist. -4824 Mar 26 j 17:59 28°**Ω**37'48 17.87415 AU -4816 May 02 j 16:08 3°**₽**29'03 0°32'48 direct -4824 Jun 12 j 05:04 26° **Ω**34'57 min. Earth dist. -4816 May 01 j 17:28 3°**£**31'21 18.42363 AU -4824 Sep 15 j 04:23 direct -4816 Jul 18 j 06:53 1°**≏**30'01 conjunction -4824 Sep 29 j 06:47 0° m 52'01 0°47'23 conjunction -4816 Nov 02 j 03:24 5°**≏**34'19 0°28'03 minimum elong -4824 Sep 29 j 06:47 0° **m** 52′01 0°47'32 minimum elong -4816 Nov 02 j 03:24 5°**£**34'19 0°28'04 max. Earth dist. -4824 Sep 29 j 14:21 0° m 53'11 19.90672 AU max. Earth dist. -4816 Nov 03 j 03:43 5°**£**37'57 20.45773 AU retrograde -4823 Jan 14 j 18:49 5° m 06'13 retrograde -4815 Feb 18 i 20:38 9°**£**42'07 opposition -4823 Mar 31 i 23:25 3°m 05'49 0°51'49 min. Earth dist. -4815 May 06 i 08:30 7°**2**44'48 18.49155 AU min. Earth dist. -4823 Mar 31 i 15:38 3° Mp 06'37 17.93961 AU opposition -4815 May 07 i 08:35 7°**-**42'22 0°29'17 direct -4823 Jun 17 j 02:27 1° m 04'01 direct -4815 Jul 22 j 21:40 5°**£**43'45 -4823 Oct 03 j 21:07 5° m 19'23 0°45'45 -4815 Nov 06 j 12:03 9°**£**46'39 conjunction conjunction 0°24'51 -4823 Oct 03 j 21:07 5° m 19'23 -4815 Nov 06 j 12:03 9°**£**46'39 minimum elong 0°45'53 minimum elong 0°24'49 -4823 Oct 04 j 06:02 5° Mp 20'45 19.97281 AU max. Earth dist. -4815 Nov 07 j 12:38 9°**£**50'19 20.52459 AU max. Earth dist. -4822 Jan 19 j 13:07 9° m 32'44 -4814 Feb 23 j 09:57 13°**£**53'48 retrograde retrograde -4822 Apr 05 j 21:22 7° m 32'21 0°49'49 -4814 May 10 j 23:07 11°**⊆**56'40 18.55727 AU opposition min. Earth dist. -4822 Apr 05 j 10:32 7° Mg 33'28 18.00629 AU -4814 May 12 j 00:11 11°**2**54'09 0°25'39 min. Earth dist. opposition -4822 Jun 21 j 22:47 -4814 Jul 27 j 10:30 9°**♀**55'55 direct 5° m 30'53 direct -4822 Oct 08 j 10:38 9° m 44'34 0°43'51 -4814 Nov 10 j 20:22 13°**⊆**57'30 0°21'31 conjunction conjunction -4822 Oct 08 j 10:38 9° m 44'35 0°43'57 -4814 Nov 10 j 20:22 13°**⊆**57'30 0°21'28 minimum elong minimum elong -4822 Oct 08 j 22:54 9° Mp 46'27 20.04000 AU -4814 Nov 11 j 23:06 14°**£**01'28 20.58875 AU max. Earth dist. max. Earth dist. retrograde -4821 Jan 24 j 04:37 13° m 57'03 retrograde -4813 Feb 27 j 21:46 18°**♀**04'00 opposition -4821 Apr 10 j 18:35 11° m 56'43 0°47'34 opposition -4813 May 16 j 15:01 16° **2**04'27 0°21'53 min. Earth dist. -4821 Apr 10 j 06:11 11° m 57'59 18.07406 AU min. Earth dist. -4813 May 15 j 12:49 16°**£**07'05 18.61977 AU direct -4821 Jun 26 j 18:48 9° **m** 55'37 direct -4813 Jul 31 j 23:45 14°**♀**06'34 -4821 Oct 12 j 23:09 14° m 07'38 0°41'43 -4813 Nov 15 j 03:59 18°**೨**06'52 0°18'05 conjunction conjunction -4821 Oct 12 j 23:09 14° m 07'38 0°41'48 -4813 Nov 15 j 03:59 18°**♀**06'52 0°18'01 minimum elong minimum elong -4821 Oct 13 j 12:40 14° m 09'41 20.10839 AU max. Earth dist. -4813 Nov 16 j 06:36 18°**♀**10'48 20.64947 AU max. Earth dist. -4820 Jan 28 j 21:44 18° mp 19'16 -4812 Mar 03 j 09:14 22° **2**12'47 retrograde retrograde -4820 Apr 14 j 14:50 16° mp 18'58 0°45'02 opposition min. Earth dist. -4812 May 19 i 02:34 20° **2**15'57 18.67872 AU -4820 Apr 13 j 23:33 16° m 20'32 18.14309 AU min. Earth dist. opposition -4812 May 20 j 05:14 20° **△**13'17 0°18'02 -4820 Jun 30 j 13:04 14° Mp 18'14 direct direct -4812 Aug 04 j 11:13 18°**£**15'42 -4820 Oct 16 j 11:05 18° m 28'37 0°39'22 conjunction -4812 Nov 18 i 11:26 22° **2**14'49 0°14'35 conjunction -4820 Oct 16 j 11:05 18° m 28'37 0°39'25 minimum elong -4812 Nov 18 j 11:26 22°**2**14'49 0°14'31 minimum elong max. Earth dist. -4820 Oct 17 j 03:55 18° m 31'11 20.17791 AU -4812 Nov 18 j 08:23 22°**2**14'22 behind sun begin -4812 Nov 18 j 14:29 22°**2**15'15 retrograde -4819 Feb 01 j 12:09 22° m 39'25 behind sun end opposition -4819 Apr 19 j 10:27 20° m 39'13 0°42'17 max. Earth dist. -4812 Nov 19 j 15:52 22° **2**19'00 20.70643 AU min. Earth dist. -4819 Apr 18 j 17:25 20° m/40'57 18.21305 AU retrograde -4811 Mar 07 j 20:32 26°**♀**20'07 direct -4819 Jul 05 j 07:26 18° Mp 38'55 opposition -4811 May 24 j 18:35 24°**£**20'39 0°14'07 min. Earth dist. -4811 May 23 j 14:54 24°**£**23'26 18.73364 AU -4819 Oct 20 j 22:00 22° m/47'41 0°36'48 direct -4811 Aug 08 j 23:17 22°**♀**23'20 conjunction -4819 Oct 20 j 22:01 22° Mp 47'41 minimum elong 0°36'51 -4819 Oct 21 j 15:56 22° m 50'23 20.24827 AU -4811 Nov 22 j 18:12 26°**2**21'17 0°11'03 max. Earth dist. conjunction retrograde -4818 Feb 06 j 04:13 26° m 57'42 minimum elong -4811 Nov 22 j 18:12 26°**£**21'17 0°10'57 min. Earth dist. -4818 Apr 23 j 09:45 24° m 59'33 18.28365 AU behind sun begin -4811 Nov 22 j 13:13 26°**£**20'35 opposition -4818 Apr 24 j 05:11 24° m 57'34 0°39'19 behind sun end -4811 Nov 22 j 23:12 26°**£**22'00 direct -4818 Jul 09 j 23:55 22° m 57'41 max. Earth dist. -4811 Nov 23 j 22:18 26°**£**25'25 20.75936 AU -4810 Feb 07 j 15:21

retrograde

-4810 Mar 12 j 06:10

0°M26'02

-4818 Oct 25 j 08:32 27° m 04'55 0°34'03

conjunction

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,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-4810 Apr 14 j 15:12	-		min. Earth dist.	-4804 Jun 21 j 14:09		
min. Earth dist.	-4810 May 28 j 03:32		18.78465 AU	direct	-4804 Sep 06 j 07:37	20°M40'03	
opposition	-4810 May 29 j 07:15	28° ≏ 26'34	0°10'09				
direct	-4810 Aug 13 j 09:01	26° ≏ 29'27		conjunction	-4804 Dec 20 j 09:26	24°M32'20	0°-13'-54
	-4810 Nov 19 j 12:28	0° M		minimum elong	-4804 Dec 20 j 09:25	24°M32'20	0°14'06
				behind sun begin	-4804 Dec 20 j 06:07	24°M31'52	
conjunction	-4810 Nov 27 j 00:46	0°M26'20	0°07'28	behind sun end	-4804 Dec 20 j 12:44	24°M32'47	
minimum elong	-4810 Nov 27 j 00:46	0°M26'20	0°07'21	max. Earth dist.	-4804 Dec 21 j 17:34	24°M36'56	21.03292 AU
behind sun begin	-4810 Nov 26 j 18:45	0°M25'29		retrograde	-4803 Apr 09 j 19:15	28°M34'22	
behind sun end	-4810 Nov 27 j 06:47	0°M27'11		min. Earth dist.	-4803 Jun 25 j 21:34	26°M37'57	19.04651 AU
max. Earth dist.	-4810 Nov 28 j 06:30	0°M30'41	20.80837 AU	opposition	-4803 Jun 27 j 03:46	26°M34'56	0°-17'-15
retrograde	-4809 Mar 16 j 16:16	4°M30'31		direct	-4803 Sep 10 j 14:25	24°M38'54	
opposition	-4809 Jun 02 j 18:51	2°M31'02	0°06'10				
min. Earth dist.	-4809 Jun 01 j 14:08		18.83176 AU	conjunction	-4803 Dec 24 j 14:33		0°-17'-16
direct	-4809 Aug 17 j 19:42	0°M34'07		minimum elong	-4803 Dec 24 j 14:32		0°17'30
				max. Earth dist.	-4803 Dec 25 j 21:34		21.05818 AU
conjunction	-4809 Dec 01 j 06:43	4°M29'59	0°03'53		-4802 Jan 20 j 04:10		
minimum elong	-4809 Dec 01 j 06:43	4° ™ 29'59	0°03'46	retrograde	-4802 Apr 14 j 03:02		
behind sun begin	-4809 Dec 01 j 00:13	4° ™ 29'04		min. Earth dist.	-4802 Jun 30 j 06:42		19.06967 AU
behind sun end	-4809 Dec 01 j 13:12	4°M30'55		opposition	-4802 Jul 01 j 11:33		0°-20'-56
max. Earth dist.	-4809 Dec 02 j 12:07		20.85373 AU		-4802 Jul 15 j 11:46		
retrograde	-4808 Mar 20 j 00:42	8°M33'41		direct	-4802 Sep 14 j 18:19		
min. Earth dist.	-4808 Jun 05 j 01:23		18.87557 AU		-4802 Nov 11 j 22:10	0° ∡ ¹	
opposition	-4808 Jun 06 j 06:01	6°M34'11	0°02'10				
direct	-4808 Aug 21 j 03:38	4°M37'25		conjunction	-4802 Dec 28 j 19:55		0°-20'-33
				minimum elong	-4802 Dec 28 j 19:55		0°20'47
conjunction	-4808 Dec 04 j 12:25	8°M32'22	0°00'13	max. Earth dist.	-4802 Dec 30 j 03:27		21.07901 AU
minimum elong	-4808 Dec 04 j 12:25	8°M32'22	0°00'04	retrograde	-4801 Apr 18 j 11:52		
behind sun begin	-4808 Dec 04 j 06:27	8°M31'32		opposition	-4801 Jul 05 j 18:43		0°-24'-31
behind sun end	-4808 Dec 04 j 18:23	8°M33'12	20.00500 444	min. Earth dist.	-4801 Jul 04 j 13:43		19.08803 AU
max. Earth dist.	-4808 Dec 05 j 19:27		20.89590 AU	direct	-4801 Sep 19 j 00:53	2° ∡ ³35′25	
desc. node	-4808 Dec 26 j 13:50	9°M48'01			4000 I 02:01 10	60 7 06140	00 221 44
retrograde	-4807 Mar 24 j 09:53	12°M35'37	10.01/1/ 411	conjunction	-4800 Jan 02 j 01:18		0°-23'-44
min. Earth dist.	-4807 Jun 09 j 10:35		18.91616 AU	minimum elong	-4800 Jan 02 j 01:18		
opposition	-4807 Jun 10 j 16:21	10°M36'06	0-1-4/	max. Earth dist.	-4800 Jan 03 j 07:15		21.09484 AU
direct	-4807 Aug 25 j 12:35	8°M39'29		retrograde min. Earth dist.	-4800 Apr 21 j 19:27		19.10128 AU
agniumation	4907 Dec. 09 : 17:51	120 m 22127	00 21 26		-4800 Jul 07 j 22:38		0°-27'-59
conjunction	-4807 Dec 08 j 17:51			opposition	-4800 Jul 09 j 01:51 -4800 Sep 22 j 04:18		027-39
minimum elong behind sun begin	-4807 Dec 08 j 17:51	12 IIL33 37 12°M32'42	0 03 33	direct	-4800 Sep 22 J 04.18	6° ∡ ³33'16	
behind sun begin	-4807 Dec 08 j 11:21 -4807 Dec 09 j 00:22	12 IIL32 42 12°M34'32		conjunction	-4799 Jan 05 j 07:04	100.727	0°-26'-49
max. Earth dist.	-4807 Dec 09 j 00:22		20 02/02 ATT	minimum elong	-4799 Jan 05 j 07:04		0°27'03
max. Earm dist.	-4806 Jan 22 j 23:05		20.93493 AU	max. Earth dist.	-4799 Jan 05 j 07.04		
retrograde	•	16°M36'29		retrograde	-4799 Apr 26 j 04:19		21.10330 AU
renograde	-4806 Jun 05 j 10:15	15°RM		min. Earth dist.	-4799 Apr 20 j 04:19		10 10870 AII
min. Earth dist.	-4806 Jun 13 j 20:38		18.95378 AU	opposition	-4799 Jul 13 j 08:32		0°-31'-19
opposition		14°M36'57		direct	-4799 Sep 26 j 10:36		0 -31 -19
direct	-4806 Aug 29 j 19:03	12°M40'30	0 -3 -44	direct	-4799 Sep 20 j 10.30	10 🗴 30 30	
anoct	-4806 Nov 15 j 02:58			conjunction	-4798 Jan 09 j 12:59	14° √ 721′50	0°-29'-45
	-4000 NOV 15 J 02.50	13 114		minimum elong	-4798 Jan 09 j 12:58		0°30'00
conjunction	-4806 Dec 12 j 23:14	16°M33'55	0°-6'-58	max. Earth dist.	-4798 Jan 10 j 16:47		
minimum elong	-4806 Dec 12 j 23:14	16°M33'55	0°07'09	retrograde	-4798 Apr 30 j 11:45		21.10700 AC
behind sun begin	-4806 Dec 12 j 17:11	16°M33'04	0 07 07	opposition	-4798 Jul 17 j 14:55		0°-34'-29
behind sun end	-4806 Dec 13 j 05:19	16°M34'46		min. Earth dist.	-4798 Jul 16 j 14:04		
max. Earth dist.	-4806 Dec 14 j 07:04		20.97095 AU	direct	-4798 Sep 30 j 14:16		19.11044710
retrograde	-4805 Apr 02 j 02:37	20°M36'27	20.57055110	ancet	1750 Sep 30 j 11.10	11 7 2021	
min. Earth dist.	-4805 Jun 18 j 04:43		18.98815 AU	conjunction	-4797 Jan 13 j 19:12	18° √ 19'29	0°-32'-33
opposition	-4805 Jun 19 j 11:01	18°M36'56	0°-9'-38	minimum elong	-4797 Jan 13 j 19:12		0°32'48
direct	-4805 Sep 03 j 02:26	16°M40'38	3 2 30	max. Earth dist.	-4797 Jan 14 j 22:39		
	.000 5 c p 05 j 02.20	10 10 10 30		retrograde	-4797 May 04 j 20:10		21.13003710
conjunction	-4805 Dec 17 j 04:12	20°M33'26	0°-10'-27	opposition	-4797 Jul 21 j 21:01		0°-37'-29
minimum elong	-4805 Dec 17 j 04:12	20°M33'26		min. Earth dist.	-4797 Jul 20 j 20:28		
behind sun begin	-4805 Dec 16 j 23:05	20°M32'43	3 20 37	direct	-4797 Oct 04 j 19:57		->0051110
behind sun end	-4805 Dec 17 j 09:18	20°M34'09			222 2.9 22.07		
max. Earth dist.	-4805 Dec 18 j 11:20		21.00366 AU	conjunction	-4796 Jan 18 j 01:18	22° ∡ 16'54	0°-35'-11
retrograde	-4804 Apr 05 j 10:33	24°M35'42		minimum elong	-4796 Jan 18 j 01:17		
opposition	-4804 Jun 22 j 19:45		0°-13'-29	max. Earth dist.	-4796 Jan 19 j 02:37		
* *	J				. j ====	,	

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4796 in astronomical counting style is the year 4797 BCE in historical counting style. -4796 May 08 i 03:36 26° ₹ 18'46 retrograde -4788 Jun 10 j 02:43 28°る15'17 retrograde opposition min. Earth dist. -4796 Jul 24 j 04:41 24° ₹721'24 19.09695 AU -4788 Aug 26 j 00:10 26°る15'07 0°-55'-8 -4796 Jul 25 j 03:04 24° ₹ 19'08 0°-40'-18 min. Earth dist. opposition -4796 Oct 07 j 23:44 22° ₹23'01 -4788 Nov 08 j 12:03 24°る17'31 direct direct conjunction -4795 Jan 21 j 07:59 26° **₹** 14'22 0°-37'-39 -4787 Feb 23 j 05:06 28°る14'02 0°-50'-12 conjunction -4795 Jan 21 j 07:59 26° **₹** 14'22 -4787 Feb 23 j 05:06 28°る14'02 0°50'26 minimum elong 0°37'55 minimum elong -4787 Feb 23 j 16:53 28°る15'43 20.85714 AU -4795 Jan 22 j 08:57 26° ₹ 17'55 21.09009 AU max. Earth dist. max. Earth dist. -4787 Mar 27 j 03:00 -4795 Apr 16 j 09:23 0°**ਨ** 0°≈ retrograde -4795 May 12 j 12:01 0°る16'22 retrograde -4787 Jun 14 j 14:31 2°≈19'19 -4795 Jun 07 j 19:56 30° R.✓ opposition -4787 Aug 30 j 06:23 0°**≈**19′07 0°-55'-53 min. Earth dist. -4795 Jul 28 j 10:32 28° ₹ 18'52 19.08283 AU -4787 Aug 29 j 20:57 min. Earth dist. 0°≈20'05 18.83472 AU -4795 Jul 29 j 08:35 -4787 Sep 07 j 00:01 opposition 28°**х** 16′38 0°-42'-56 30°Ŗる direct -4795 Oct 12 j 04:52 26° ₹20'21 direct -4787 Nov 12 j 19:42 28°**පි**21'16 -4794 Jan 22 j 02:21 0°궁 -4786 Jan 15 j 17:45 0°≈ conjunction -4794 Jan 25 j 14:51 0°る12'00 0°-39'-56 conjunction -4786 Feb 27 j 16:47 2°≈18'50 0°-50'-44 minimum elong -4794 Jan 25 j 14:51 0°る12'00 0°40'12 minimum elong -4786 Feb 27 j 16:47 2°≈18'50 0°50'59 max. Earth dist. -4794 Jan 26 j 13:36 0°る15'13 21.07378 AU max. Earth dist. -4786 Feb 28 j 01:25 2°≈20'04 20.81082 AU retrograde -4794 May 16 j 19:25 4°る14'11 retrograde -4786 Jun 19 j 00:12 6°≈24'44 opposition -4794 Aug 02 j 14:13 2°**る**14'21 0°-45'-21 opposition -4786 Sep 03 j 13:15 4°**≈**24'27 0°-56'-21 min. Earth dist. -4794 Aug 01 j 18:24 2°る16'22 19.06451 AU min. Earth dist. -4786 Sep 03 i 06:58 4°≈25'06 18.78620 AU direct -4794 Oct 16 i 08:23 0°る17'53 direct -4786 Nov 17 i 01:04 2°≈26'19 conjunction -4793 Jan 29 i 22:05 4°る09'56 0°-42'-2 conjunction -4785 Mar 04 i 05:09 6°**≈**24'59 0°-51'-1 -4793 Jan 29 j 22:05 4°る09'56 0°42'19 minimum elong -4785 Mar 04 j 05:09 6°≈24'59 0°51'14 minimum elong max. Earth dist. -4793 Jan 30 j 20:26 4°る13'06 21.05349 AU max. Earth dist. -4785 Mar 04 j 11:51 6°≈25'56 20.76014 AU retrograde -4793 May 21 j 04:42 8°る12'23 retrograde -4785 Jun 23 j 12:23 10°≈31'31 -4793 Aug 06 j 19:34 6°**ප**12'27 0°-47'-34 -4785 Sep 07 j 20:20 opposition opposition 8°≈31'07 0°-56'-31 -4793 Aug 06 j 00:02 6°る14'27 19.04229 AU min. Earth dist. -4785 Sep 07 j 15:11 min. Earth dist. 8°≈31'39 18.73325 AU 4°**る**15'49 -4785 Nov 21 j 09:35 -4793 Oct 20 j 13:35 direct direct 6°≈32'39 -4792 Feb 03 j 05:42 8°**ප**08'21 0°-43'-56 -4784 Mar 07 j 18:17 10°≈32'28 conjunction conjunction 0°-51'-2 -4792 Feb 03 j 05:41 -4784 Mar 07 j 18:17 10°≈32'28 0°51'15 8°る08'21 0°44'11 minimum elong minimum elong -4792 Feb 04 j 01:48 8°る11'12 21.02949 AU -4784 Mar 07 j 21:50 10°≈32'58 20.70509 AU max. Earth dist. max. Earth dist. -4792 May 24 j 12:09 12°る11'09 -4784 Jun 26 j 22:52 14°≈39'39 retrograde retrograde -4792 Aug 09 j 07:53 10°중12'54 19.01660 AU -4784 Sep 11 j 03:49 12°≈39'07 0°-56'-24 min. Earth dist. opposition opposition -4792 Aug 10 j 01:06 10°る11'09 0°-49'-33 min. Earth dist. -4784 Sep 11 j 01:52 12°≈39'19 18.67624 AU direct -4792 Oct 23 j 16:43 8°중14'19 direct -4784 Nov 24 j 16:40 10°≈40'16 conjunction -4791 Feb 06 j 13:57 12°る07'27 0°-45'-38 conjunction -4783 Mar 12 j 08:17 14°≈41'17 0°-50'-47 -4791 Feb 06 j 13:57 12°る07'27 0°45'54 minimum elong -4783 Mar 12 j 08:17 14°≈41'17 0°51'00 minimum elong max. Earth dist. -4791 Feb 07 j 09:25 12°る10'13 21.00214 AU max. Earth dist. -4783 Mar 12 j 09:45 14°≈41'30 20.64636 AU retrograde -4791 May 28 j 22:53 16°る10'39 -4783 Mar 17 j 18:07 15°≈ -4791 Aug 14 j 06:33 14°る10'35 0°-51'-19 retrograde -4783 Jul 01 j 11:34 18°≈49'08 opposition -4791 Aug 13 j 13:48 14°る12'18 18.98743 AU -4783 Sep 15 j 11:36 16°≈48'26 0°-56'00 min. Earth dist. opposition -4791 Oct 27 j 22:25 12°る13'35 direct min. Earth dist. -4783 Sep 15 i 10:48 16°≈48'31 18.61573 AU -4783 Nov 08 i 15:00 15°R≈ -4790 Feb 10 j 22:42 16°**♂**07'25 0°-47'-7 conjunction direct -4783 Nov 29 i 02:04 14°≈49'10 -4790 Feb 10 i 22:42 16°**⋜**07'25 0°47'22 minimum elong -4783 Dec 19 i 08:55 15°≈ max. Earth dist. -4790 Feb 11 j 15:41 16°る09'50 20.97125 AU retrograde -4790 Jun 02 j 06:35 20°る11'03 -4782 Mar 16 j 22:55 18°≈51'28 0°-50'-16 conjunction -4790 Aug 18 j 12:11 18°る10'57 0°-52'-51 -4782 Mar 16 j 22:55 18°≈51'28 0°50'27 opposition minimum elong -4782 Mar 16 j 21:31 18°≈51'16 20.58431 AU min. Earth dist. -4790 Aug 17 j 22:02 18°정12'24 18.95485 AU max. Earth dist. -4790 Nov 01 j 01:32 16°♂13'46 direct retrograde -4782 Jul 05 j 22:57 22°≈59'59 opposition -4782 Sep 19 j 19:52 20°≈59'08 0°-55'-17 -4789 Feb 15 j 08:10 20° පි08'24 0°-48'-23 conjunction min. Earth dist. -4782 Sep 19 j 22:06 20°≈58'54 18.55243 AU -4789 Feb 15 j 08:10 20°る08'24 0°48'38 direct -4782 Dec 03 j 10:26 18°≈59'26 minimum elong -4789 Feb 16j00:10 20°る10'41 20.93701 AU max. Earth dist. -4789 Jun 06 j 18:02 24°정12'33 -4781 Mar 21 j 14:18 23°≈03'04 0°-49'-28 retrograde conjunction -4789 Aug 22 j 17:57 22°정12'25 0°-54'-7 -4781 Mar 21 j 14:18 23°≈03'04 opposition minimum elong 0°49'40 min. Earth dist. -4789 Aug 22 j 04:30 22°る13'48 18.91872 AU max. Earth dist. -4781 Mar 21 j 10:52 23°≈02'34 20.52002 AU direct -4789 Nov 05 j 08:07 20°る15'03 retrograde -4781 Jul 10 j 12:41 27°≈12'18 opposition -4781 Sep 24 j 04:29 25°≈11'16 0°-54'-16 conjunction -4788 Feb 19 j 18:05 24°る10'34 0°-49'-24 min. Earth dist. -4781 Sep 24 j 07:42 25°≈10'56 18.48720 AU minimum elong -4788 Feb 19 j 18:05 24°る10'34 0°49'40 -4781 Dec 07 j 20:57 23°≈11'08 direct

max. Earth dist.

-4788 Feb 20 j 07:25 24°る12'28 20.89903 AU

	nical year style is used: The						age 9
conjunction	-4780 Mar 25 j 06:23	-		direct	-4772 Jan 11 j 03:36		•
minimum elong	-4780 Mar 25 j 06:23	27 ≈16'09 27°≈16'09		direct	-4772 Mar 24 j 19:08	27 γ (3022	
2	•				-4//2 Mai 24 j 19.08	UI	
max. Earth dist.	-4780 Mar 25 j 00:30		20.45398 AU		4772 4 20:22-11	2° Y 08'06	09 201 22
, 1	-4780 May 15 j 05:07	0° \		conjunction	-4772 Apr 30 j 22:11		0°-30'-33
retrograde	-4780 Jul 14 j 01:12	1° ¥ 26′07		minimum elong	-4772 Apr 30 j 22:11	2°Υ08'07	0°30'34
• . •	-4780 Sep 13 j 13:50	30°R≈	00 501 50	max. Earth dist.	-4772 Apr 29 j 23:26		19.91753 AU
opposition	-4780 Sep 27 j 13:49	29°≈24'57	0°-52'-58	retrograde	-4772 Aug 18 j 16:38	6° Υ 24'42	00.221.0
min. Earth dist.	-4780 Sep 27 j 19:51		18.42058 AU	opposition	-4772 Oct 31 j 16:57	4° Υ 23'01	0°-32'-9
direct	-4780 Dec 11 j 06:12			min. Earth dist.	-4772 Nov 01 j 13:13		17.88434 AU
	-4779 Mar 03 j 11:12	0° ℋ		direct	-4771 Jan 14 j 19:54	2° Ƴ 19'31	
	4770 M 20 : 22-24	101/20150	00 471 5	:	4771 M 05 : 21.52	6° Ƴ 38'50	0°-27'-15
conjunction	-4779 Mar 29 j 23:24	1° ¥ 30′50		conjunction	-4771 May 05 j 21:53	6° Υ 38'50	0°-27'-13 0°27'15
minimum elong	-4779 Mar 29 j 23:24	1° ¥ 30′50		minimum elong	-4771 May 05 j 21:53		
max. Earth dist.	-4779 Mar 29 j 15:21	5° H 41'34	20.38700 AU	max. Earth dist.	-4771 May 04 j 19:58	6° Y 34'56 10° Y 56'13	19.85105 AU
retrograde	-4779 Jul 18 j 16:25		09 511 22	retrograde	-4771 Aug 23 j 12:13	8° Υ 54'26	09 201 22
opposition	-4779 Oct 01 j 23:29		0°-51'-22	opposition	-4771 Nov 05 j 08:56		0°-28'-23
min. Earth dist.	-4779 Oct 02 j 06:27		18.35327 AU	min. Earth dist.	-4771 Nov 06 j 06:33		17.81820 AU
direct	-4779 Dec 15 j 18:10	1° ¥ 39'16		direct	-4770 Jan 19 j 14:30	6° Y 50′32	
. ,.	4770 A 02:17.12	50 1/ 47115	00 451 20		4770 M 10 : 22 22	1100011125	00 221 45
conjunction	-4778 Apr 03 j 17:13	5°) 47'15	0°-45'-30	conjunction	-4770 May 10 j 22:23		0°-23'-45
minimum elong	-4778 Apr 03 j 17:13	5°) 47'15	0°45'37	minimum elong		11°Υ11'26	0°23'44
max. Earth dist.	-4778 Apr 03 j 07:03		20.31943 AU	max. Earth dist.	, ,		19.78528 AU
retrograde	-4778 Jul 23 j 06:18	9° ¥ 58'47		retrograde	-4770 Aug 28 j 08:20		
opposition	-4778 Oct 06 j 10:05	7° ¥ 57'23		opposition	-4770 Nov 10 j 01:52		0°-24'-24
min. Earth dist.	-4778 Oct 06 j 19:39		18.28569 AU	min. Earth dist.	-4770 Nov 11 j 01:09		17.75308 AU
direct	-4778 Dec 20 j 04:36	5° ¥ 56′00		direct	-4769 Jan 24 j 08:55	11°'Y'23'22	
						000	
conjunction	-4777 Apr 08 j 11:39			conjunction	, ,	15° Y 45'45	0°-20'-5
minimum elong	-4777 Apr 08 j 11:40			minimum elong	, ,	15° Y 45'45	0°20'03
max. Earth dist.	-4777 Apr 07 j 23:16		20.25199 AU	max. Earth dist.	-4769 May 14 j 17:42		19.72104 AU
retrograde	-4777 Jul 27 j 22:57			retrograde	-4769 Sep 02 j 04:17	20° Y 04'34	
opposition	-4777 Oct 10 j 21:13			opposition	J	18° Y 02'33	0°-20'-15
min. Earth dist.	-4777 Oct 11 j 07:40		18.21834 AU	min. Earth dist.	-4769 Nov 15 j 20:00		17.68991 AU
direct	-4777 Dec 24 j 17:57	10° 米 14'39		direct	-4768 Jan 29 j 05:50		
				max. Earth dist.	-4768 May 18 j 19:07	20° Y 17′11	19.65900 AU
conjunction	-4776 Apr 12 j 07:14		0°-41'-31				
minimum elong	-4776 Apr 12 j 07:14			conjunction	-4768 May 20 j 00:46		0°-16'-16
max. Earth dist.	-4776 Apr 11 j 17:03		20.18470 AU	minimum elong	-4768 May 20 j 00:46		0°16'13
retrograde	-4776 Jul 31 j 14:38			retrograde	-4768 Sep 06 j 00:51		
opposition	-4776 Oct 14 j 09:06		0°-44'-48	opposition	-4768 Nov 18 j 13:50		0°-15'-56
min. Earth dist.	-4776 Oct 14 j 22:10		18.15121 AU	min. Earth dist.	-4768 Nov 19 j 15:26		17.62925 AU
direct	-4776 Dec 28 j 06:07			direct	-4767 Feb 02 j 02:40		
max. Earth dist.	-4775 Apr 16 j 10:51	18° ∺ 45'40	20.11781 AU	max. Earth dist.	-4767 May 23 j 18:49	24° 'Y' 54'19	19.59996 AU
conjunction	-4775 Apr 17 j 03:41		0°-39'-9	conjunction	-4767 May 25 j 02:41		0°-12'-21
minimum elong	-4775 Apr 17 j 03:41	18°) 48′09	0°39'13	minimum elong	-4767 May 25 j 02:41	24° Y 59'12	0°12'16
retrograde	-4775 Aug 05 j 08:40			behind sun begin	-4767 May 24 j 22:16		
opposition	-4775 Oct 18 j 21:45		0°-42'-3	behind sun end	-4767 May 25 j 07:06		
min. Earth dist.	-4775 Oct 19 j 11:58		18.08442 AU	retrograde	-4767 Sep 10 j 21:28		
direct	-4774 Jan 01 j 20:57			opposition	-4767 Nov 23 j 09:06		0°-11'-30
max. Earth dist.	-4774 Apr 21 j 06:36	23° ∺ 09'57	20.05096 AU	min. Earth dist.	-4767 Nov 24 j 11:45		17.57215 AU
		.,		direct	-4766 Feb 07 j 01:26		
conjunction	-4774 Apr 22 j 00:59			max. Earth dist.	-4766 May 28 j 21:31	29°'Y'33'17	19.54478 AU
minimum elong	-4774 Apr 22 j 00:59		0°36'35				
retrograde	-4774 Aug 10 j 02:16			conjunction	-4766 May 30 j 04:57	29° Y 38′08	0°-8'-19
opposition	-4774 Oct 23 j 11:21		0°-39'00	minimum elong	-4766 May 30 j 04:56	29° Ƴ 38′07	0°08'14
min. Earth dist.	-4774 Oct 24 j 04:03		18.01765 AU	behind sun begin	-4766 May 29 j 22:59	29° Y 37'14	
direct	-4773 Jan 06 j 11:05	23° ∺ 23'16		behind sun end	-4766 May 30 j 10:54	29° Ƴ 39'01	
					-4766 Jun 05 j 03:00	0°8	
conjunction	-4773 Apr 26 j 23:05			retrograde	-4766 Sep 15 j 19:15	3° 8 58'44	
minimum elong	-4773 Apr 26 j 23:05			opposition	-4766 Nov 28 j 05:08	1° 8 56'27	0°-6'-58
max. Earth dist.	-4773 Apr 26 j 01:42		19.98427 AU	min. Earth dist.	-4766 Nov 29 j 07:58		17.51914 AU
	-4773 Jun 07 j 06:27	0°Υ			-4765 Jan 24 j 05:52	30° ₹ Υ	
retrograde	-4773 Aug 14 j 21:26	1° Y ′55'09		direct	-4765 Feb 12 j 00:41	29° Y ′50′44	
	-4773 Oct 25 j 13:26	30° ₹			-4765 Mar 02 j 16:53	0° 8	
opposition	-4773 Oct 28 j 01:38	29° ¥ 53'31		max. Earth dist.	-4765 Jun 02 j 22:40	4° 8 13'20	19.49413 AU
min. Earth dist.	-4773 Oct 28 j 19:40	29° ¥ 51'34	17.95102 AU				

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4765 in astronomical counting style is the year 4766 BCE in historical counting style. -4765 Jun 04 i 07:34 4°818'25 0°-4'-14 retrograde -4759 Oct 18 i 16:41 7°**Ⅱ**09'01 conjunction -4765 Jun 04 j 07:34 4°818'25 0°04'08 -4759 Dec 30 j 22:44 5°**I**107'00 0°24'56 minimum elong opposition -4765 Jun 04 j 00:53 4°817'25 -4758 Jan 01 j 02:15 5°**I**04'00 17.29617 AU behind sun begin min. Earth dist. -4765 Jun 04 j 14:14 4°819'26 -4758 Mar 17 j 10:15 3°**Ⅱ**00′25 behind sun end direct -4765 Sep 20 j 16:41 8°839'34 -4758 Jul 07 j 01:04 7°**I**28'43 19.28935 AU retrograde max. Earth dist. -4765 Dec 03 j 01:52 opposition 6°**8**37'13 0°-2'-22 -4758 Jul 08 j 08:01 7°II33'36 0°24'17 min. Earth dist. -4765 Dec 04 j 05:36 6°**8**34'11 17.47115 AU conjunction -4758 Jul 08 j 08:01 0°24'31 direct -4764 Feb 17 j 00:11 4°**8**31'13 minimum elong 7°**Ⅲ**33'36 max. Earth dist. -4758 Oct 23 j 18:46 -4764 Jun 07 j 02:21 8°**8**55'02 19.44872 AU retrograde 11°**Ⅲ**56'49 opposition -4757 Jan 05 j 00:25 9°II54'50 0°29'07 conjunction -4764 Jun 08 j 10:39 9°800'03 0°00'00 min. Earth dist. -4757 Jan 06 j 02:25 9°**I**52'01 17.28465 AU -4764 Jun 08 j 10:39 9°**8**00'03 -4757 Mar 22 j 15:37 minimum elong 0°00'06 direct 7°**Ⅱ**48'15 -4764 Jun 08 j 04:08 -4757 Jul 12 j 06:11 12°**I**17'00 19.28017 AU behind sun begin 8°859'04 max. Earth dist. behind sun end -4764 Jun 08 j 17:10 9°801'02 conjunction asc. node -4764 Jun 11 j 08:59 9°810'58 -4757 Jul 13 j 11:31 12°**Ⅲ**21'39 0°27'56 retrograde -4764 Sep 24 j 16:23 13°**8**21'39 minimum elong -4757 Jul 13 j 11:31 12°**Ⅲ**21'39 0°28'10 opposition -4764 Dec 06 j 23:27 11°**8**19'18 0°02'16 retrograde -4757 Oct 28 j 17:55 16°**I**I44'50 min. Earth dist. -4764 Dec 08 j 02:43 11°816'19 17.42839 AU opposition -4756 Jan 10 j 02:33 14°**II**42'55 0°33'06 direct -4763 Feb 21 j 01:07 9°**8**13'06 min. Earth dist. -4756 Jan 11 j 04:51 14°**Д**40'04 17.27790 AU max. Earth dist. -4763 Jun 12 j 04:56 13°**8**37'50 19.40872 AU direct -4756 Mar 26 j 18:48 12°**Д**36'20 max. Earth dist. -4756 Jul 16 j 09:22 17°**Д**05'09 19.27596 AU conjunction -4763 Jun 13 j 13:53 13°**8**42'58 0°04'13 minimum elong -4763 Jun 13 j 13:53 13°**8**42'58 0°04'22 conjunction -4756 Jul 17 j 14:34 17°**Д**09'46 0°31'24 behind sun begin -4763 Jun 13 j 07:15 13°**8**41'57 minimum elong -4756 Jul 17 j 14:34 17°**Д**09'46 0°31'37 behind sun end -4763 Jun 13 j 20:31 13°**8**43'58 retrograde -4756 Nov 01 і 19:30 21°**Д**32'53 -4763 Jul 04 j 10:38 15°8 -4755 Jan 14 j 05:04 19°**耳**30'59 opposition 0°36'50 -4763 Sep 29 j 14:48 18°805'00 -4755 Jan 15 j 05:33 19°**Д**28'20 17.27620 AU retrograde min. Earth dist. -4763 Dec 11 j 21:53 16°802'41 0°06'55 -4755 Apr 01 j 01:11 17°**Д**24'26 direct opposition -4763 Dec 13 j 01:59 15°859'37 17.39131 AU min. Earth dist. -4762 Jan 05 j 22:14 15°R -4755 Jul 22 j 17:11 21°**Ц**57'45 0°34'37 conjunction -4762 Feb 26 j 01:00 13°**8**56'19 -4755 Jul 22 j 17:11 21°**Д**57'45 0°34'53 direct minimum elong -4762 Apr 16 j 23:26 15°**8** -4755 Jul 21 j 14:27 21°**Д**53'31 19.27682 AU max. Earth dist. -4762 Jun 17 j 09:04 18°**8**22'05 19.37449 AU -4755 Nov 06 j 18:26 26°**Ц**20'41 max. Earth dist. retrograde -4754 Jan 19 j 07:59 24° **Ⅱ**18'49 0°40'18 opposition -4762 Jun 18 j 17:22 18°**8**27'07 0°08'21 -4754 Jan 20 j 08:00 24°**II**16'13 17.27970 AU conjunction min. Earth dist. -4762 Jun 18 j 17:22 18°**8**27'07 0°08'32 -4754 Apr 06 j 05:51 22°**Ⅲ**12'19 minimum elong direct -4762 Jun 18 j 11:30 18°**8**26'14 behind sun begin behind sun end -4762 Jun 18 j 23:15 18°**8**28'01 conjunction -4754 Jul 27 j 19:09 26°**I**I45'20 0°37'36 retrograde -4762 Oct 04 j 16:15 22°849'32 minimum elong -4754 Jul 27 j 19:09 26° **1**45′20 0°37′51 opposition -4762 Dec 16 j 20:56 20°847'17 0°11'33 max. Earth dist. -4754 Jul 26 j 16:57 26°**Ц**41'11 19.28317 AU min. Earth dist. -4762 Dec 18 j 00:08 20°844'19 17.35980 AU -4754 Sep 22 j 22:33 0ಂತಾ -4761 Mar 03 j 03:27 18°840'50 -4754 Nov 11 j 18:51 1°508'02 direct retrograde -4753 Jan 02 j 22:04 30°R II -4761 Jun 23 j 20:59 23°**8**12'26 0°12'28 -4753 Jan 24 j 10:47 29°**Д**06'11 0°43'29 conjunction opposition -4761 Jun 23 j 20:59 23°**8**12'26 0°12'39 -4753 Jan 25 j 08:49 29°**Д**03'48 17.28893 AU minimum elong min. Earth dist. -4761 Jun 23 j 16:46 23°**8**11'48 behind sun begin direct -4753 Apr 11 j 11:50 26° **1**59'44 -4761 Jun 24 i 01:12 23°813'05 behind sun end -4753 Jul 08 i 03:29 -4761 Jun 22 j 12:47 23°**8**07'24 19.34563 AU max. Earth dist. -4753 Aug 01 j 20:40 retrograde -4761 Oct 09 j 15:12 27°\(\mathbf{2}\)35'10 conjunction 1°532'20 0°40'19 -4761 Dec 21 j 20:53 25°\(\mathbf{2}33'00\) 0°16'07 minimum elong -4753 Aug 01 j 20:40 1°532'20 0°40'35 opposition min. Earth dist. -4761 Dec 23 j 00:57 25°829'56 17.33364 AU max. Earth dist. -4753 Jul 31 j 21:30 1°528'39 19.29530 AU direct -4760 Mar 07 j 04:08 23°**8**26'28 retrograde -4753 Nov 16 j 18:01 5°954'42 max. Earth dist. -4760 Jun 26 j 16:48 27°853'45 19.32202 AU -4752 Jan 29 j 13:56 3°952'53 opposition 0°46'22 min. Earth dist. -4752 Jan 30 j 10:39 3°550'39 17.30397 AU conjunction -4760 Jun 28 j 00:45 27°**8**58'46 0°16'31 direct -4752 Apr 15 j 16:44 1°9546'33 minimum elong -4760 Jun 28 j 00:45 27°858'46 0°16'44 -4760 Jul 31 j 06:54 Π $^{\circ}0$ conjunction -4752 Aug 05 j 21:19 6°**©**18′33 0°42'45 -4760 Oct 13 j 17:20 2°**Ⅲ**21'44 -4752 Aug 05 j 21:18 retrograde minimum elong 6°9518'33 0°43'00 -4760 Dec 25 j 21:21 0°II19'38 0°20'36 -4752 Aug 04 j 23:13 opposition max. Earth dist. 6°515'03 19.31347 AU -4752 Nov 20 j 17:49 10°540'33 min. Earth dist. -4760 Dec 27 j 00:15 0°**Ц**16'42 17.31246 AU retrograde -4759 Jan 02 j 10:10 30°₹**8** opposition -4751 Feb 02 j 17:02 8°938'46 0°48'54 direct -4759 Mar 12 j 08:14 28°**8**13'04 min. Earth dist. -4751 Feb 03 j 11:34 8°936'47 17.32536 AU -4759 May 17 j 01:29 Π °0 direct -4751 Apr 20 j 21:11 6°932'36 max. Earth dist. -4759 Jul 01 j 21:29 2°**Ⅱ**41'00 19.30322 AU conjunction -4751 Aug 10 j 21:28 11°503'53 0°44'53 -4759 Jul 03 j 04:35 2°II45'54 0°20'28 -4751 Aug 10 j 21:27 11°503'53 conjunction minimum elong 0°45'07 -4759 Jul 03 j 04:35 2°II45'54 0°20'41 max. Earth dist. -4751 Aug 10 j 02:45 11°500'55 19.33807 AU minimum elong

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4751 in astronomical counting style is the year 4752 BCE in historical counting style. -4751 Nov 25 i 17:27 15°525'27 max. Earth dist. -4743 Sep 16 j 18:56 $18^{\circ}\Omega$ 24'26 19.71857 AU retrograde -4750 Feb 07 j 20:13 13°\$23'46 0°51'06 $-4742 \text{ Jan } 02 \text{ j } 01:01 \quad 22^{\circ} \Omega 40'59$ opposition retrograde min. Earth dist. -4750 Feb 08 j 12:34 13°522'01 17.35307 AU -4742 Mar 18 j 13:18 $20^{\circ} \Omega 40'18 0^{\circ}55'32$ opposition -4750 Apr 26 j 01:20 11°5017'49 -4742 Mar 18 j 11:24 20° **Ω**40'30 17.74902 AU direct min. Earth dist. -4742 Jun 03 j 20:26 18°**Ω**37'17 direct -4750 Aug 15 j 20:41 15°5048'16 0°46'42 conjunction -4750 Aug 15 j 20:41 15°5548'16 0°46'57 -4742 Sep 21 j 12:15 22° **Ω**57'27 0°49'27 minimum elong conjunction -4750 Aug 15 j 03:34 15°545'34 19.36902 AU -4742 Sep 21 j 12:15 22° **Ω**57'27 0°49'37 max. Earth dist. minimum elong -4742 Sep 21 j 14:44 22° **Ω**57'51 19.77972 AU retrograde -4750 Nov 30 j 17:01 20°509'22 max. Earth dist. -4741 Jan 06 j 19:07 $27^{\circ}\Omega$ 13'09 opposition -4749 Feb 12 j 23:14 18°907'47 0°52'57 retrograde min. Earth dist. -4749 Feb 13 j 13:32 18°506'16 17.38713 AU opposition -4741 Mar 23 j 13:29 $25^{\circ}\Omega$ 12'33 $0^{\circ}54'27$ -4741 Mar 23 j 10:29 25°**Ω**12'52 17.81094 AU direct -4749 May 01 j 04:14 16°502'07 min. Earth dist. -4741 Jun 08 j 19:01 23°**Ω**09'54 direct conjunction -4749 Aug 20 j 19:24 20°531'38 0°48'12 minimum elong -4749 Aug 20 j 19:24 20°531'38 0°48'25 conjunction -4741 Sep 26 j 04:18 27°Ω28'26 0°48'21 max. Earth dist. -4749 Aug 20 j 05:28 20°529'26 19.40608 AU minimum elong -4741 Sep 26 j 04:18 27°**Ω**28'26 0°48'29 retrograde -4749 Dec 05 j 16:34 24°952'11 max. Earth dist. -4741 Sep 26 j 08:23 27°**Ω**29'04 19.84246 AU opposition -4748 Feb 18 j 02:00 22°\$50'46 0°54'26 -4741 Nov 08 j 16:19 0°m min. Earth dist. -4748 Feb 18 j 13:41 22°549'31 17.42684 AU retrograde -4740 Jan 11 j 14:17 1°M)43'18 direct -4748 May 05 j 07:54 20°545'27 -4740 Mar 20 j 13:20 30°RΩ opposition -4740 Mar 27 j 12:46 $29^{\circ}\Omega 42'44$ $0^{\circ}53'02$ conjunction -4748 Aug 24 i 17:19 25°\$\sigma13'55 0\circ\49'23 min. Earth dist. $-4740 \text{ Mar } 27 \text{ j } 06:30 \quad 29^{\circ} \Omega 43'23 \quad 17.87436 \text{ AU}$ minimum elong -4748 Aug 24 i 17:19 25°\$\sigma13'55 0\circ\49'37 direct -4740 Jun 12 j 18:36 $27^{\circ}\Omega 40'26$ max. Earth dist. -4748 Aug 24 i 05:21 25°\$12'01 19.44853 AU -4740 Aug 27 j 23:42 retrograde -4748 Dec 09 j 15:27 29°533'55 -4747 Feb 22 j 04:50 27°532'37 0°55'33 -4740 Sep 29 j 19:31 1° m 57'20 0°46'57 opposition conjunction -4747 Feb 22 j 14:48 27°531'34 17.47183 AU minimum elong -4740 Sep 29 j 19:31 1° m 57'20 0°47'05 min. Earth dist. -4747 May 10 j 10:09 25°\$27'40 max. Earth dist. -4740 Sep 30 j 02:45 1° Mp 58'27 19.90664 AU direct -4739 Jan 15 j 06:51 6° Mp 11'21 retrograde -4739 Apr 01 j 11:33 -4747 Aug 29 j 14:24 29°554'58 0°50'13 4° mo 10'50 0°51'19 conjunction opposition -4747 Aug 29 j 14:24 29°\$54'58 0°50'26 -4739 Apr 01 j 03:56 4° ነው 11'37 17.93938 AU min. Earth dist. minimum elong -4747 Aug 29 j 05:18 29°553'32 19.49587 AU -4739 Jun 17 j 15:14 2° m 08'54 max. Earth dist. direct -4747 Aug 30 j 22:15 0°**Ω** -4739 Oct 04 j 09:36 -4747 Dec 14 j 14:07 4°**Ω**14'22 6° m 24'07 0°45'18 retrograde conjunction -4746 Feb 27 j 07:19 $2^{\circ}\Omega$ 13'14 0° 56'17 -4739 Oct 04 j 09:36 6° m 24'08 0°45'24 opposition minimum elong -4746 Feb 27 j 14:18 $2^{\circ}\Omega$ 12'30 17.52116 AU -4739 Oct 04 j 18:26 6° Mp 25'29 19.97256 AU min. Earth dist. max. Earth dist. -4738 Jan 20 j 00:53 10° m 37'19 direct -4746 May 15 j 14:01 0°**Ω**08'41 retrograde opposition -4738 Apr 06 j 09:21 8° Mp 36'50 0°49'18 conjunction -4746 Sep 03 j 10:50 4°**Ω**34'42 0°50'44 min. Earth dist. -4738 Apr 05 j 22:28 8° Mp 37'57 18.00614 AU minimum elong -4746 Sep 03 j 10:50 4°Ω34'42 0°50'56 direct -4738 Jun 22 j 12:27 6° m 35'15 max. Earth dist. -4746 Sep 03 j 03:57 4°**Ω**33'38 19.54714 AU retrograde -4746 Dec 19 j 11:21 8°**£**53′26 -4738 Oct 08 j 23:05 10° Mp 48'51 0°43'23 conjunction -4745 Mar 04 j 09:26 6°**Ω**52'27 0°56'39 -4738 Oct 08 j 23:06 10° Mp 48'51 0°43'28 opposition minimum elong min. Earth dist. -4745 Mar 04 j 15:06 6°Ω51'51 17.57426 AU max. Earth dist. -4738 Oct 09 j 11:14 10° M 50'42 20.04008 AU -4745 May 20 j 15:25 4°**Ω**48'17 -4737 Jan 24 j 16:10 15° Mp 01'11 direct retrograde -4737 Apr 11 i 06:18 13° m 00'48 0°47'01 opposition -4745 Sep 08 i 06:29 -4737 Apr 10 j 17:58 13° m 02'04 18.07449 AU conjunction 9°Ω12'58 0°50'54 min. Earth dist. -4737 Jun 27 j 06:58 10° **m** 59'37 9°Ω12'58 0°51'06 minimum elong -4745 Sep 08 i 06:29 direct 9°**Ω**12'14 19.60184 AU max. Earth dist. -4745 Sep 08 i 01:51 retrograde $-4745 \,\mathrm{Dec}\ 24\,\mathrm{j}\ 08:57\ 13^{\circ}\Omega30'59$ -4737 Oct 13 j 11:35 15° mp 11'35 0°41'14 conjunction -4744 Mar 08 j 11:10 $11^{\circ}\Omega 30'07$ $0^{\circ}56'39$ -4737 Oct 13 j 11:35 15° mp 11'35 0°41'18 opposition minimum elong min. Earth dist. -4744 Mar 08 j 13:42 11° Ω 29'52 17.63026 AU max. Earth dist. -4737 Oct 14 j 01:05 15° mp 13'39 20.10925 AU direct -4744 May 24 j 18:34 -4736 Jan 29 j 09:00 19° M 23'08 9°**Ω**26'21 retrograde min. Earth dist. -4736 Apr 14 j 11:10 17° Mp 24'24 18.14436 AU conjunction -4744 Sep 12 j 01:14 13° Ω 49'36 0°50'44 opposition -4736 Apr 15 j 02:33 17° M 22'50 0°44'29 minimum elong -4744 Sep 12 j 01:14 13° Ω 49'36 0°50'55 direct -4736 Jul 01 j 01:41 15° Mp 22'05 -4744 Sep 11 j 23:08 13° Ω 49'16 19.65907 AU max. Earth dist. -4744 Sep 30 j 23:40 15°**Ω** -4736 Oct 16 j 23:21 19° m 32'28 0°38'51 conjunction -4744 Dec 28 j 04:32 $18^{\circ}\Omega$ 06'53 -4736 Oct 16 j 23:21 19° m/32'28 retrograde minimum elong 0°38'55 -4743 Mar 13 j 12:39 $16^{\circ}\Omega 06'08$ $0^{\circ}56'16$ -4736 Oct 17 j 16:12 19° M 35'01 20.17963 AU opposition max. Earth dist. -4735 Feb 01 j 23:57 23° mp 43'13 min. Earth dist. -4743 Mar 13 j 13:59 16° Ω05'59 17.68867 AU retrograde -4743 Apr 10 j 09:18 15°RΩ opposition -4735 Apr 19 j 22:10 21° mp 43'03 0°41'42 direct -4743 May 29 j 19:00 14°**Ω**02'45 min. Earth dist. -4735 Apr 19 j 05:15 21° m 44'46 18.21513 AU -4743 Jul 16 j 04:37 15°**Ω** direct -4735 Jul 05 j 18:51 19° Mp 42'45 -4743 Sep 16 j 19:11 18° **Ω**24'28 0°50'15 -4735 Oct 21 j 10:22 23° m 51'34 0°36'17 conjunction conjunction

-4735 Oct 21 j 10:22 23° m 51'34 0°36'19

minimum elong

-4743 Sep 16 j 19:11 18° **Ω**24'28 0°50'26

minimum elong

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4735 in astronomical counting style is the year 4736 BCE in historical counting style. -4735 Oct 22 i 04:17 23° m 54'17 20.25071 AU max. Earth dist. conjunction -4727 Nov 23 i 06:36 27° \(\Omega\) 26'21 0°10'28 minimum elong -4734 Feb 06 i 15:37 28° m 01'34 -4727 Nov 23 j 06:36 27°**2**26'21 retrograde 0°10'22 -4734 Apr 24 j 16:45 26° m 01'31 0°38'43 behind sun begin -4727 Nov 23 j 01:24 27°**2**25'37 opposition -4727 Nov 23 j 11:48 27°**£**27'06 -4734 Apr 23 j 21:24 26° Mp 03'29 18.28634 AU min. Earth dist. behind sun end -4727 Nov 24 j 10:27 27°**2**30'26 20.75852 AU -4734 Jul 10 j 11:06 24° Mp 01'41 direct max. Earth dist. -4726 Jan 09 j 10:44 0°M -4734 Oct 25 j 20:52 28° m 08'59 0°33'31 -4726 Mar 12 j 18:24 conjunction retrograde 1°M31'00 -4734 Oct 25 j 20:52 28° Mp 08'59 -4726 May 17 j 19:29 minimum elong 0°33'32 30°**₹**Ω -4734 Oct 26 j 17:45 -4726 May 29 j 18:55 29°**£**31'29 0°09'31 max. Earth dist. 28° m/12'08 20.32171 AU opposition -4734 Nov 26 j 14:30 0∘**ত** min. Earth dist. -4726 May 28 j 15:13 29°**2**34'15 18.78380 AU retrograde -4733 Feb 11 j 05:52 2° 2 18'15 direct -4726 Aug 13 j 21:22 27°**♀**34'17 -4733 Apr 29 j 10:44 -4726 Oct 31 j 22:17 opposition 0°**£**18′21 0°35'32 0°M -4733 Apr 28 j 14:04 min. Earth dist. 0°**2**20'27 18.35698 AU -4733 May 07 j 00:25 30°R, Mp conjunction -4726 Nov 27 j 13:01 1°M31'07 0°06'55 direct -4733 Jul 15 j 03:26 28° m 18'58 minimum elong -4726 Nov 27 j 13:01 1°M31'07 0°06'49 -4733 Sep 17 j 10:03 0∘**⊽** behind sun begin -4726 Nov 27 j 06:54 1°M30'15 behind sun end -4726 Nov 27 j 19:08 1°M31'59 conjunction -4733 Oct 30 j 06:31 2°**£**24'47 0°30'34 max. Earth dist. -4726 Nov 28 j 18:43 1°ML35'27 20.80767 AU minimum elong -4733 Oct 30 j 06:31 2°**-**24'47 0°30'35 retrograde -4725 Mar 17 j 03:10 5°M35'11 max. Earth dist. -4733 Oct 31 j 04:03 2°**2**28'01 20.39188 AU min. Earth dist. -4725 Jun 02 j 01:52 3°M38'32 18.83133 AU retrograde -4732 Feb 15 j 20:15 6°**♀**33'20 opposition -4725 Jun 03 j 06:36 3°M35'39 0°05'33 min. Earth dist. -4732 May 02 j 05:26 4°**2**35'50 18.42654 AU direct -4725 Aug 18 i 07:53 1°M38'39 opposition -4732 May 03 i 03:58 4°**₽**33'34 0°32'10 direct -4732 Jul 18 j 17:54 2°**£**34'37 conjunction -4725 Dec 01 i 18:44 5°**™**34'27 0°03'21 minimum elong -4725 Dec 01 i 18:45 5°**M**⋅34'27 0°03'12 -4732 Nov 02 j 15:52 6°**2**38'59 0°27'29 behind sun begin -4725 Dec 01 j 12:14 5°M233'32 conjunction -4732 Nov 02 j 15:52 6°**£**38'59 0°27'28 behind sun end -4725 Dec 02 j 01:16 5°M35'22 minimum elong max. Earth dist. -4732 Nov 03 j 16:01 6°**2**42'36 20.46048 AU max. Earth dist. -4725 Dec 03 j 00:12 5°M38'44 20.85368 AU -4731 Feb 19 j 09:27 10°**2**46'51 -4724 Mar 20 j 12:35 9°M38'03 retrograde retrograde opposition -4731 May 07 j 20:27 8°**-**47'11 0°28'39 -4724 Jun 06 j 17:43 7°MJ38'29 0°01'35 opposition 8°**≏**49'35 18.49408 AU 7°M41'22 18.87599 AU -4731 May 06 j 20:47 min. Earth dist. -4724 Jun 05 j 12:49 min. Earth dist. -4724 Aug 21 j 15:39 -4731 Jul 23 j 09:16 6°**£**48'39 5°M41'40 direct direct -4724 Nov 02 j 05:44 7°M46'32 desc. node -4731 Nov 07 j 00:31 10°**£**51'38 0°24'16 conjunction -4724 Dec 05 j 00:32 -4731 Nov 07 j 00:31 10°**£**51'38 0°24'14 9°M36'33 0°00'-19 minimum elong conjunction 9°M236'33 -4731 Nov 08 j 00:50 10°**⊆**55'15 20.52679 AU -4724 Dec 05 j 00:31 max. Earth dist. minimum elong 0°00'28 -4730 Feb 23 j 22:30 14°**£**58'49 -4724 Dec 04 j 17:59 retrograde behind sun begin 9°M35'38 -4724 Dec 05 j 07:03 min. Earth dist. -4730 May 11 j 11:20 13°**2**01'44 18.55906 AU behind sun end 9°**M**37′28 opposition -4730 May 12 j 12:10 12° **2**59'14 0°25'00 max. Earth dist. -4724 Dec 06 j 07:42 9°M41'05 20.89680 AU direct -4730 Jul 27 j 22:08 11°**♀**01'03 retrograde -4723 Mar 24 j 21:21 13°M39'42 min. Earth dist. -4723 Jun 09 j 22:05 11°ML43'08 18.91762 AU -4730 Nov 11 j 08:54 15° **2**02'42 0°20'56 -4723 Jun 11 j 03:56 11°ML40'09 0°-2'-21 conjunction opposition -4730 Nov 11 j 08:54 15°**£**02'42 0°20'52 direct -4723 Aug 26 j 00:36 9°**M**₊43'31 minimum elong -4730 Nov 12 j 11:17 15°**2**06'37 20.59006 AU max. Earth dist. -4729 Feb 28 j 10:01 19°**♀**09'12 conjunction -4723 Dec 09 j 05:53 13°M237'36 0°-3'-56 retrograde -4723 Dec 09 i 05:52 13°MJ37'36 min. Earth dist. -4729 May 16 i 01:11 17° **2**12'17 18.62060 AU minimum elong -4729 May 17 j 02:57 17° **2**09'42 0°21'14 -4723 Dec 08 i 23:24 13°M 36'41 opposition behind sun begin -4729 Aug 01 j 12:14 15°**£**11'50 -4723 Dec 09 i 12:21 13°M 38'30 direct behind sun end max. Earth dist. -4723 Dec 10 j 12:30 13°M42'02 20.93692 AU -4729 Nov 15 j 16:36 19°**£**12'11 0°17'30 -4722 Jan 02 j 10:23 15°M conjunction -4729 Nov 15 i 16:36 19° \(\Omega\) 12'11 0°17'26 retrograde -4722 Mar 29 j 05:56 17° ML 40'23 minimum elong max. Earth dist. -4729 Nov 16 j 18:47 19°**2**16'03 20.64986 AU min. Earth dist. -4722 Jun 14 j 08:08 15°ML43'49 18.95625 AU retrograde -4728 Mar 03 j 21:55 23° **△**18'03 -4722 Jun 15 j 13:42 15° ML40'51 0°-6'-17 opposition -4722 Jul 02 j 22:28 15°RM opposition -4728 May 20 j 17:11 21° **2**18'34 0°17'23 min. Earth dist. -4728 May 19 j 14:43 21°**2**21'13 18.67866 AU direct -4722 Aug 30 j 06:46 13°M-44'24 direct -4728 Aug 04 j 23:27 19°**♀**20'57 -4722 Oct 24 j 15:22 15°M -4728 Nov 18 j 23:52 23°**£**20'04 0°14'01 -4722 Dec 13 j 11:11 17° ML37'47 0°-7'-27 conjunction conjunction -4728 Nov 18 j 23:52 23°**Ω**20'04 -4722 Dec 13 j 11:11 17° M 37'47 0°07'38 minimum elong 0°13'56 minimum elong -4728 Nov 18 j 20:23 23°**£**19'34 -4722 Dec 13 j 05:13 17° ML36'57 behind sun begin behind sun begin -4728 Nov 19 j 03:21 23°**£**20'34 -4722 Dec 13 j 17:09 17° ML38'37 behind sun end behind sun end max. Earth dist. -4728 Nov 20 j 04:00 23°**2**24'12 20.70602 AU max. Earth dist. -4722 Dec 14 j 19:13 17°ML42'24 20.97383 AU retrograde -4727 Mar 08 j 07:47 27°**2**25'18 retrograde -4721 Apr 02 j 14:44 21°M 40'15 min. Earth dist. -4727 May 24 j 03:07 25°**2**28'34 18.73292 AU opposition -4721 Jun 19 j 22:44 19° ML 40'47 0°-10'-10 opposition -4727 May 25 j 06:31 25°**£**25'49 0°13'28 min. Earth dist. -4721 Jun 18 j 16:27 19°ML43'48 18.99139 AU -4727 Aug 09 j 11:55 23°**♀**28'27 direct -4721 Sep 03 j 14:36 17°M44'31 direct

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	ical year style is used: Th	-					
conjunction	-4721 Dec 17 j 16:19			min. Earth dist.	-4713 Jul 21 j 09:07		
minimum elong	-4721 Dec 17 j 16:19		0°11'0/	opposition	-4713 Jul 22 j 09:28		0°-3/'-48
behind sun begin	-4721 Dec 17 j 11:23			direct	-4713 Oct 05 j 08:45	19° X '31'06	
behind sun end	-4721 Dec 17 j 21:15		21 00721 ATT		4712 I 10 : 12.47	220.722221	09 251 27
max. Earth dist.	-4721 Dec 18 j 23:29		21.00/21 AU	conjunction	-4712 Jan 18 j 13:47		0°-35'-27
retrograde	-4720 Apr 05 j 22:48		10.02204 ATT	minimum elong	-4712 Jan 18 j 13:47		0°35'43
min. Earth dist.	-4720 Jun 22 j 01:57			max. Earth dist.	-4712 Jan 19 j 14:56		21.09692 AU
opposition	-4720 Jun 23 j 07:31		0°-14'00	retrograde	-4712 May 08 j 15:29		00 401 24
direct	-4720 Sep 06 j 19:47	21 11644 00		opposition	-4712 Jul 25 j 15:26		0°-40'-34
· · · · · · · · · · · ·	4720 D 20 : 21-24	250M 26110	00 141 21	min. Earth dist.	-4712 Jul 24 j 17:08		19.091/9 AU
conjunction	-4720 Dec 20 j 21:34			direct	-4712 Oct 08 j 11:36	23 X.7973	
minimum elong behind sun begin	-4720 Dec 20 j 21:34 -4720 Dec 20 j 18:39		0 14 34	conjunction	-4711 Jan 21 j 20:25	279.710155	0°-37'-52
behind sun end	-4720 Dec 20 j 18:39			minimum elong	-4711 Jan 21 j 20:25		
max. Earth dist.	-4720 Dec 21 j 00:30		21 02660 ATT	max. Earth dist.	-4711 Jan 22 j 21:28		
retrograde	-4719 Apr 10 j 07:40		21.03009 AU	max. Earth dist.	-4711 Mar 14 j 02:20		21.064// AU
min. Earth dist.	-4719 Jun 26 j 09:46		10.05010 ATT	retrograde	-4711 May 13 j 00:36		
opposition	-4719 Jun 27 j 15:41			renograde	-4711 Jul 14 j 01:54		
direct	-4719 Sep 11 j 02:28		0 -17 -43	opposition	-4711 Jul 29 j 21:04		0° 43' 0
direct	-4/19 Sep 11 J 02.26	23 11643 02		min. Earth dist.	-4711 Jul 28 j 23:03		
conjunction	-4719 Dec 25 j 02:52	29°M34'55	0° 17' 42	direct	-4711 Oct 12 j 17:32		19.07749 AU
minimum elong	-4719 Dec 25 j 02:52	29°M34'55		direct	-4710 Jan 02 j 22:46		
max. Earth dist.	-4719 Dec 26 j 09:37		21.06163 AU		-4/10 Jan 02 J 22.40	0.0	
max. Earm dist.	-4718 Jan 01 j 10:09	29 IIC39 19 0° √ 1	21.00103 AU	conjunction	-4710 Jan 26 j 03:14	1°る17'39	0° 40' 7
retrograde	-4718 Apr 14 j 15:25	3° ∡ ¹36'50		minimum elong	-4710 Jan 26 j 03:14	1° ठ 17'39	
opposition	-4718 Jul 01 j 23:27	1° ∡ 737′31	0° 21' 25	max. Earth dist.	-4710 Jan 27 j 02:03		21.06847 AU
min. Earth dist.	-4718 Jun 30 j 18:53		19.07276 AU	retrograde	-4710 May 17 j 07:48	5° る 19'56	21.00647 AU
iiiii. Eartii dist.	-4718 Aug 19 j 02:23	30°RM	19.07270 AU	min. Earth dist.	-4710 May 17 J 07:48		19.05937 AU
direct	-4718 Sep 15 j 07:10	29°M41'41		opposition	-4710 Aug 02 j 00:43		0°-45'-32
direct	-4718 Oct 11 j 23:53	29 G41 41 0° ⊼		direct	-4710 Oct 16 j 20:26	1°る23'37	0 -43 -32
	-4/16 Oct 11 J 25.55	0 X -		direct	-4/10 Oct 10 j 20.20	1 02337	
conjunction	-4718 Dec 29 j 08:24	3° ∡ ³33'16	0°-20'-59	conjunction	-4709 Jan 30 j 10:33	5°る15'44	0°-42'-11
minimum elong	-4718 Dec 29 j 08:24	3°×733'16		minimum elong	-4709 Jan 30 j 10:32	5°る15'44	
max. Earth dist.	-4718 Dec 30 j 15:35		21.08160 AU	max. Earth dist.	-4709 Jan 31 j 09:05		21.04856 AU
retrograde	-4717 Apr 19 j 00:08	7°×735'05	21.08100 AU	retrograde	-4709 May 21 j 16:54		21.04830 AU
min. Earth dist.	-4717 Jul 05 j 02:17		19.08999 AU	opposition	-4709 Aug 07 j 08:05		0°-47'-42
opposition	-4717 Jul 06 j 06:51	5°×735'48	0°-24'-59	min. Earth dist.	-4709 Aug 06 j 12:28		19.03762 AU
direct	-4717 Sep 19 j 12:56	3° × ⁷ 40'03	0 -24-37	direct	-4709 Oct 21 i 01:59	5°る21'43	17.03702 AO
direct	4717 Sep 17 J 12.30	3 7 40 03		direct	4707 Oct 21 j 01:57	3 021 43	
conjunction	-4716 Jan 02 j 13:47	7° ∡ ³31'25	0°-24'-9	conjunction	-4708 Feb 03 j 18:04	9° る 14'19	0°-44'-3
minimum elong	-4716 Jan 02 j 13:47	7° ∡ ³31'24		minimum elong	-4708 Feb 03 j 18:04		0°44'18
max. Earth dist.	-4716 Jan 03 j 19:09		21.09604 AU	max. Earth dist.	-4708 Feb 04 j 14:17		21.02508 AU
retrograde	-4716 Apr 22 j 07:51	11° ∡ ³33'12		retrograde	-4708 May 25 j 01:18		
min. Earth dist.	-4716 Jul 08 j 11:16		19.10160 AU	opposition	-4708 Aug 10 j 13:45		0°-49'-39
opposition	-4716 Jul 09 j 14:09	9° ∡ ³33'54	0°-28'-25	min. Earth dist.	-4708 Aug 09 j 20:24		19.01240 AU
direct	-4716 Sep 22 j 17:21	7° ∡ ³38'09		direct	-4708 Oct 24 j 05:26	9° る 20'24	
	1 ,				J		
conjunction	-4715 Jan 05 j 19:42	11° ∡ ¹29'22	0°-27'-11	conjunction	-4707 Feb 07 j 02:26	13° る 13'37	0°-45'-42
minimum elong	-4715 Jan 05 j 19:42	11° ∡ ¹29'22	0°27'26	minimum elong	-4707 Feb 07 j 02:26	13° る 13'37	0°45'57
max. Earth dist.	-4715 Jan 07 j 01:04	11° ∡ ³33'33	21.10469 AU	max. Earth dist.	-4707 Feb 07 j 22:03	13° る 16'24	20.99814 AU
retrograde	-4715 Apr 26 j 16:30	15° ∡ ³31′07		retrograde	-4707 May 29 j 10:40	17° る 16'53	
opposition	-4715 Jul 13 j 20:48	13° ∡ ³31'47	0°-31'-42	opposition	-4707 Aug 14 j 19:10	15° る 16'50	0°-51'-23
min. Earth dist.	-4715 Jul 12 j 18:12	13° ∡ ³34'28	19.10723 AU	min. Earth dist.	-4707 Aug 14 j 02:23	15° る 18'33	18.98358 AU
direct	-4715 Sep 26 j 23:06	11° ∡ ³36′01		direct	-4707 Oct 28 j 10:49	13° る 19'51	
conjunction	-4714 Jan 10 j 01:34			conjunction	-4706 Feb 11 j 11:14		0°-47'-9
minimum elong	-4714 Jan 10 j 01:34		0°30'20	minimum elong	-4706 Feb 11 j 11:14		0°47'24
max. Earth dist.	-4714 Jan 11 j 04:48		21.10745 AU	max. Earth dist.	-4706 Feb 12 j 04:11		20.96751 AU
retrograde	-4714 Apr 30 j 23:48	19° ∡¹ 28'56		retrograde	-4706 Jun 02 j 19:50		
min. Earth dist.	-4714 Jul 17 j 02:46		19.10719 AU	min. Earth dist.	-4706 Aug 18 j 10:50		
opposition	-4714 Jul 18 j 03:22	17° ∡ ¹29'31	0°-34'-50	opposition	-4706 Aug 19 j 01:02		0°-52'-51
direct	-4714 Oct 01 j 02:43	15° ∡ 33'39		direct	-4706 Nov 01 j 14:52	17° る 20'14	
	4712 I 14:07 07	100 70 440	00.221.51		4705 E 1 15:30 ::	21071	00 46! 22
conjunction	-4713 Jan 14 j 07:37		0°-32'-51	conjunction	-4705 Feb 15 j 20:41		0°-48'-22
minimum elong	-4713 Jan 14 j 07:36		0°33'07	minimum elong	-4705 Feb 15 j 20:41		
max. Earth dist.	-4713 Jan 15 j 10:48		21.104/0 AU	max. Earth dist.	-4705 Feb 16 j 12:43		20.93309 AU
retrograde	-4713 May 05 j 08:33	25° X' 26'3/		retrograde	-4705 Jun 07 j 06:10	23° 0 19'12	

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4705 in astronomical counting style is the year 4706 BCE in historical counting style. -4705 Aug 23 j 06:56 23°る19'04 0°-54'-5 minimum elong -4697 Mar 22 i 03:06 24°≈09'34 0°49'16 opposition -4705 Aug 22 j 17:34 23°る20'26 18.91453 AU max. Earth dist. -4697 Mar 22 j 00:03 24°≈09'08 20.50890 AU min. Earth dist. -4705 Nov 05 j 20:49 21°る21'41 -4697 Jul 11 j 02:15 28°≈18'57 direct retrograde -4697 Sep 24 j 17:50 26°≈17'50 0°-53'-51 opposition -4697 Sep 24 j 20:50 26°≈17'31 18.47634 AU -4704 Feb 20 j 06:52 25°る17'17 0°-49'-21 conjunction min. Earth dist. -4697 Dec 08 j 10:09 24°≈17'38 minimum elong -4704 Feb 20 j 06:52 25°る17'17 0°49'35 direct -4704 Feb 20 j 19:55 25°정19'08 20.89444 AU max. Earth dist. -4696 Mar 25 j 19:15 28°≈22'46 0°-48'-1 retrograde -4704 Jun 10 j 15:40 29°る22'05 conjunction -4696 Mar 25 j 19:15 28°≈22'46 0°48'10 opposition -4704 Aug 26 j 13:10 27°₹21'54 0°-55'-3 minimum elong -4696 Mar 25 j 13:36 28°≈21'57 20.44349 AU min. Earth dist. -4704 Aug 26 j 02:48 27°중22'58 18.87370 AU max. Earth dist. direct -4704 Nov 09 j 01:38 25°る24'17 -4696 Apr 23 j 08:05 0°**∀** -4696 Jul 14 j 14:16 retrograde 2°**)** 32′54 -4703 Feb 23 j 18:03 29°₹20'51 0°-50'-6 -4696 Sep 28 j 03:07 conjunction opposition 0°**)**31′39 0°-52'-31 minimum elong -4703 Feb 23 j 18:03 29°**♂**20'51 0°50'20 min. Earth dist. -4696 Sep 28 j 08:55 0°**升**31'03 18.41056 AU max. Earth dist. -4703 Feb 24 j 05:34 29°る22'30 20.85135 AU -4696 Oct 10 j 17:06 30°R≈ -4703 Mar 07 j 04:54 0°≈ direct -4696 Dec 11 j 19:11 28°**≈**31'03 retrograde -4703 Jun 15 j 03:24 3°≈26'13 -4695 Feb 09 j 22:50 0°**)**€ opposition -4703 Aug 30 j 19:38 1°**≈**25'58 0°-55'-45 min. Earth dist. -4703 Aug 30 j 10:24 1°≈26'55 18.82818 AU conjunction -4695 Mar 30 j 12:19 2°**)(**37'40 0°-46'-39 -4703 Oct 08 j 14:20 30°Rる minimum elong -4695 Mar 30 j 12:19 2°**)** € 37'40 0°46'47 direct -4703 Nov 13 j 08:46 29°る28'04 max. Earth dist. -4695 Mar 30 j 04:43 2°**升**36'34 20.37748 AU -4703 Dec 18 j 14:51 0°≈ retrograde -4695 Jul 19 i 05:43 6° **)** 48'36 opposition -4695 Oct 02 i 12:58 4°\(\frac{15}{47'15}\) 0°-50'-53 conjunction -4702 Feb 28 i 05:43 3°≈25'41 0°-50'-35 min. Earth dist. -4695 Oct 02 i 19:33 4°**)** 46'33 18.34431 AU -4702 Feb 28 i 05:43 3°**≈**25'41 0°50'48 direct -4695 Dec 16 j 07:13 2°\ 46'16 minimum elong -4702 Feb 28 j 13:56 3°≈26'51 20.80345 AU max. Earth dist. -4702 Jun 19 j 13:08 7°≈31'39 -4694 Apr 04 j 06:02 6°**¥**54'24 0°-45'-2 retrograde conjunction -4702 Sep 04 j 02:31 5°≈31'17 0°-56'-9 -4694 Apr 04 j 06:02 6°¥54'24 0°45'10 opposition minimum elong -4702 Sep 03 j 20:26 -4694 Apr 03 j 20:11 6°**升**52'58 20.31104 AU min. Earth dist. 5°≈31'55 18.77800 AU max. Earth dist. -4694 Jul 23 j 19:32 11°**米**06'09 -4702 Nov 17 j 14:22 3°≈33'05 direct retrograde -4694 Oct 06 j 23:37 9°\(\)\(\)04'44\(\) 0°-48'-57 opposition -4701 Mar 04 j 18:14 7°≈31'46 0°-50'-49 -4694 Oct 07 j 08:50 9°**升**03'45 18.27788 AU conjunction min. Earth dist. -4701 Mar 04 j 18:14 -4694 Dec 20 j 17:50 7°≈31'46 0°51'03 direct 7° \(\frac{1}{2}\) minimum elong -4701 Mar 05 j 00:45 max. Earth dist. 7°≈32'42 20.75119 AU -4693 Apr 09 j 00:43 11° **∺** 13'05 0°-43'-9 -4701 Jun 24 j 01:47 11°≈38'22 retrograde conjunction -4701 Sep 08 j 09:35 opposition 9°≈37'52 0°-56'-17 minimum elong -4701 Sep 08 j 04:38 -4693 Apr 08 j 12:46 11°**米**11'20 20.24474 AU min. Earth dist. 9°≈38'23 18.72358 AU max. Earth dist. direct -4701 Nov 21 j 22:55 7°≈39'18 retrograde -4693 Jul 28 j 12:36 15° **★** 25'41 opposition -4693 Oct 11 j 10:44 13° ¥24'13 0°-46'-44 conjunction -4700 Mar 08 j 07:18 11°≈39'09 0°-50'-47 min. Earth dist. -4693 Oct 11 j 20:50 13°**米**23'08 18.21157 AU minimum elong -4700 Mar 08 j 07:18 11°≈39'09 0°51'00 direct -4693 Dec 25 j 07:11 11°**米**22'31 max. Earth dist. -4700 Mar 08 j 10:39 11°≈39'38 20.69485 AU -4700 May 14 j 20:06 15°≈ -4692 Apr 12 j 20:23 15° ¥ 33'50 0°-41'00 conjunction -4700 Jun 27 j 11:54 15°≈46'25 -4692 Apr 12 j 20:23 15°**)** 33'50 0°41'06 retrograde minimum elong -4700 Aug 10 j 18:07 15°R≈ max. Earth dist. -4692 Apr 12 j 06:22 15°**)** 31'46 20.17835 AU -4700 Sep 11 j 17:08 13°≈45'46 0°-56'-7 -4692 Aug 01 i 04:08 19°\ 47'17 opposition retrograde -4692 Oct 14 i 22:50 17° **X** 45'47 0°-44'-13 min. Earth dist. -4700 Sep 11 j 15:19 13°≈45'57 18.66548 AU opposition -4700 Nov 25 i 05:20 11°≈46'47 direct min. Earth dist. -4692 Oct 15 i 11:41 17°\ 44'24 18.14516 AU -4699 Feb 26 j 23:25 15°≈ direct -4692 Dec 28 j 19:12 15° **X** 43'44 -4699 Mar 12 j 21:18 15°≈47'52 0°-50'-30 -4691 Apr 17 j 16:57 19°**)** € 56'41 0°-38'-36 conjunction conjunction -4699 Mar 12 j 21:18 15°≈47'52 0°50'41 minimum elong -4691 Apr 17 j 16:57 19° **€** 56'41 0°38'41 minimum elong max. Earth dist. -4699 Mar 12 j 22:51 15°≈48'06 20.63525 AU max. Earth dist. -4691 Apr 17 j 00:21 19°**)** 54'13 20.11192 AU retrograde -4699 Jul 02 j 01:15 19°≈55'47 retrograde -4691 Aug 05 j 23:02 24° **€** 10'59 opposition -4699 Sep 16 j 00:47 17°≈54'59 0°-55'-39 opposition -4691 Oct 19 j 11:32 22° **★** 09'26 0°-41'-25 min. Earth dist. -4699 Sep 16 j 00:02 17°≈55'04 18.60441 AU min. Earth dist. -4691 Oct 20 j 01:32 22° **∺**07'56 18.07862 AU -4699 Nov 29 j 15:28 15°≈55'37 direct direct -4690 Jan 02 j 10:28 20°**₭**07'02 -4698 Mar 17 j 11:53 19°≈57'59 0°-49'-56 -4690 Apr 22 j 14:27 24°**米**21'37 0°-35'-57 conjunction conjunction -4698 Mar 17 j 11:53 19°≈57'59 0°50'07 -4690 Apr 22 j 14:27 24°**米**21'37 0°35'59 minimum elong minimum elong -4698 Mar 17 j 10:32 19°≈57'47 20.57295 AU -4690 Apr 21 j 20:00 24° ¥ 18'53 20.04514 AU max. Earth dist. max. Earth dist. retrograde -4698 Jul 06 j 11:57 24°≈06'37 retrograde -4690 Aug 10 j 16:00 28° ¥ 36'44 opposition -4698 Sep 20 j 09:09 22°≈05'39 0°-54'-54 opposition -4690 Oct 24 j 01:17 26° ¥ 35'09 0°-38'-22 min. Earth dist. -4698 Sep 20 j 11:18 22°≈05'25 18.54114 AU min. Earth dist. -4690 Oct 24 j 17:54 26° ★33'21 18.01178 AU direct -4698 Dec 03 j 22:56 20°≈05'51 direct -4689 Jan 07 j 00:22 24° **∺** 32'23 -4697 Mar 22 j 03:06 24°≈09'34 0°-49'-6 -4689 Apr 27 j 12:34 28° **\(\)**48'34 0°-33'-3 conjunction conjunction

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4689 in astronomical counting style is the year 4690 BCE in historical counting style. -4689 Apr 27 j 12:34 28° ¥48'34 0°33'05 minimum elong -4682 May 30 j 18:27 0°846'08 0°07'38 minimum elong max. Earth dist. -4689 Apr 26 j 15:15 28°) (45'23 19.97826 AU behind sun begin -4682 May 30 j 12:21 0°845'13 0°**8**47'03 -4689 May 17 j 15:41 $0^{\circ}\Upsilon$ -4682 May 31 j 00:34 behind sun end 5°**8**06'43 -4689 Aug 15 j 11:52 3°Y04'30 -4682 Sep 16 j 09:19 retrograde retrograde -4689 Oct 28 j 15:45 1°Υ02'49 0°-35'-2 opposition -4682 Nov 28 j 19:00 3°**8**04'23 0°-6'-19 opposition -4689 Oct 29 j 09:34 1°**Υ**00'54 17.94484 AU -4682 Nov 29 j 21:23 min. Earth dist. min. Earth dist. 3°**8**01'30 17.52057 AU -4681 Feb 12 j 14:11 -4689 Nov 23 j 02:31 30°**₹** direct 0°**8**58'40 28°\ 59'39 direct -4688 Jan 11 j 17:32 -4688 Feb 29 j 10:32 $0^{\circ}\Upsilon$ conjunction -4681 Jun 04 j 21:01 5°**8**26'17 0°-3'-40 minimum elong -4681 Jun 04 j 21:02 5°**8**26'17 0°03'34 conjunction -4688 May 01 j 11:47 3°**Υ**17'27 0°-29'-57 behind sun begin -4681 Jun 04 j 14:19 5°**8**25'17 -4688 May 01 j 11:47 -4681 Jun 05 j 03:45 minimum elong 3°**Y**17′27 0°29'58 behind sun end 5°**8**27'18 -4688 Apr 30 j 12:59 -4681 Jun 03 j 12:46 max. Earth dist. 3°**Y**14′02 19.91125 AU max. Earth dist. 5°**8**21'18 19.49667 AU retrograde -4688 Aug 19 j 05:57 7°**Υ**34'08 retrograde -4681 Sep 21 j 06:45 9°**8**47'25 opposition -4688 Nov 01 j 07:00 5°**Ƴ**32'22 0°-31'-28 opposition -4681 Dec 03 j 15:48 7°**8**45'05 0°-1'-44 min. Earth dist. -4688 Nov 02 j 03:13 5°**Ƴ**30′10 17.87800 AU min. Earth dist. -4681 Dec 04 j 18:58 7°**8**42'07 17.47475 AU direct -4687 Jan 15 j 09:54 3°Y28'48 direct -4680 Feb 17 j 13:16 5°**8**39'08 max. Earth dist. -4687 May 05 j 09:51 7°**Υ**44'16 19.84480 AU asc. node -4680 Apr 21 j 21:08 7°**8**21'29 max. Earth dist. -4680 Jun 07 j 16:34 10°803'01 19.45335 AU conjunction -4687 May 06 j 11:32 7°**Υ**48'08 0°-26'-38 minimum elong -4687 May 06 j 11:32 7°**Y**48'08 0°26'37 conjunction -4680 Jun 09 j 00:10 10°**8**07'55 0°00'33 retrograde -4687 Aug 24 i 02:13 12°Υ05'34 minimum elong -4680 Jun 09 j 00:10 10°**8**07'55 0°00'43 opposition -4687 Nov 05 i 23:04 10°**Υ**03'41 0°-27'-41 behind sun begin -4680 Jun 08 j 17:25 10°**8**06'54 min. Earth dist. -4687 Nov 06 j 20:24 10°**Υ**01'22 17.81208 AU behind sun end -4680 Jun 09 i 06:54 10°**8**08'56 direct -4686 Jan 20 i 04:50 7°**Y**59'42 retrograde -4680 Sep 25 i 06:13 14°\(\mathbf{2}29'31\) max. Earth dist. -4686 May 10 j 09:30 12°Υ 16'34 19.77947 AU -4680 Dec 07 j 13:20 12°\(\mathbf{2}27'15\) 0°02'53 opposition -4680 Dec 08 j 16:17 12°**8**24'18 17.43392 AU min. Earth dist. -4686 May 11 j 11:52 12° Υ 20'34 0°-23'-8 -4679 Feb 21 j 14:33 10°821'09 direct conjunction -4686 May 11 j 11:52 12°**Υ**20'34 max. Earth dist. -4679 Jun 12 j 18:58 14°**8**45'56 19.41511 AU 0°23'07 minimum elong -4686 Aug 28 j 21:23 16°**Υ**38'41 retrograde -4686 Nov 10 j 15:58 14°**Υ**'36'41 0°-23'-43 -4679 Jun 14 j 03:30 14°**8**51'00 0°04'45 opposition conjunction -4686 Nov 11 j 15:04 14° Υ 34'10 17.74763 AU -4679 Jun 14 j 03:29 14°**8**51'00 0°04'54 min. Earth dist. minimum elong -4685 Jan 24 j 23:40 12°**Υ**32'19 -4679 Jun 13 j 20:55 14°**8**50'00 behind sun begin direct -4685 May 15 j 07:47 16° **Y** 50'13 19.71614 AU -4679 Jun 14 j 10:04 14°**8**52'00 max. Earth dist. behind sun end -4679 Jun 16 j 13:19 15°**8** -4685 May 16 j 12:44 16° **Y** 54'37 0° -19'-28 -4679 Sep 30 j 04:56 19°**8**13'03 conjunction retrograde -4685 May 16 j 12:44 16°**Υ**54'37 -4679 Dec 12 j 11:49 17°**8**10'51 0°07'31 minimum elong 0°19'25 opposition retrograde -4685 Sep 02 j 17:51 21°**Υ**13'25 min. Earth dist. -4679 Dec 13 j 15:34 17°**8**07'49 17.39835 AU opposition -4685 Nov 15 j 09:25 19°**Υ**11'18 0°-19'-33 direct -4678 Feb 26 j 14:40 15°**8**04'37 min. Earth dist. -4685 Nov 16 j 09:33 19°**Υ**08'40 17.68563 AU max. Earth dist. -4678 Jun 17 j 23:05 19°**8**30'26 19.38202 AU direct -4684 Jan 29 j 19:53 17°**Υ**06'31 max. Earth dist. -4684 May 19 j 09:16 21°**Υ**25'51 19.65546 AU -4678 Jun 19 j 06:57 19°**8**35'25 0°08'53 conjunction -4678 Jun 19 j 06:56 19°**8**35'25 minimum elong -4684 May 20 j 14:20 21°**Υ**30'17 0°-15'-39 -4678 Jun 19 j 01:13 19°**8**34'33 conjunction behind sun begin -4684 May 20 j 14:20 21°**Υ**'30'17 -4678 Jun 19 j 12:40 19°**8**36'17 minimum elong behind sun end -4684 May 20 j 13:24 21° Υ 30'09 -4678 Oct 05 i 05:48 23°\(23\)57'51 behind sun begin retrograde -4684 May 20 j 15:16 21° Υ 30'25 -4678 Dec 17 j 10:56 21°855'44 0°12'07 behind sun end opposition -4684 Sep 06 i 14:33 25°**γ**49'41 -4678 Dec 18 j 14:02 21°852'47 17.36762 AU retrograde min. Earth dist. -4684 Nov 19 i 03:51 23°**Υ**'47'29 0°-15'-15 opposition direct -4677 Mar 03 j 17:02 19°**8**49'26 min. Earth dist. -4684 Nov 20 i 05:06 23°**Υ**44'44 17.62656 AU max. Earth dist. -4677 Jun 23 j 02:33 24°8 16'00 19.35360 AU direct -4683 Feb 02 i 17:10 21° Υ 42'21 max. Earth dist. -4683 May 24 j 08:55 26° Υ 02'40 19.59818 AU -4677 Jun 24 j 10:43 24°\(\mathbf{2}21'02\) 0°12'58 conjunction -4677 Jun 24 j 10:43 24°\(\mathbf{2}21'02\) 0°13'10 minimum elong conjunction -4683 May 25 j 16:05 26°**Y**07'27 0°-11'-44 behind sun begin -4677 Jun 24 j 06:49 24°**8**20'27 minimum elong -4683 May 25 j 16:06 26°**Υ**'07'27 0°11'40 behind sun end -4677 Jun 24 j 14:37 24°**8**21'38 -4677 Oct 10 j 05:44 28°**8**43'47 behind sun begin -4683 May 25 j 11:22 26°**Υ**06'45 retrograde -4677 Dec 22 j 10:48 26°**8**41'44 0°16'40 behind sun end -4683 May 25 j 20:49 26°**Υ**08'10 opposition -4683 Aug 10 j 19:48 min. Earth dist. -4677 Dec 23 j 14:50 26°838'41 17.34164 AU 0°8 -4683 Sep 11 j 11:15 0°**8**27'28 -4676 Mar 07 j 18:09 24°**8**35'21 retrograde direct -4683 Oct 13 j 11:56 30°R℃ -4676 Jun 27 j 06:45 29°**8**02'38 19.32991 AU max. Earth dist. -4683 Nov 23 j 23:02 28°**Y**25'11 0°-10'-50 opposition min. Earth dist. $-4683 \text{ Nov } 25 \text{ j } 01:06 \quad 28^{\circ} \Upsilon 22'20 \quad 17.57138 \text{ AU}$ conjunction -4676 Jun 28 j 14:35 29°**8**07'39 0°17'00 direct -4682 Feb 07 j 14:49 26°**Y**19'43 minimum elong -4676 Jun 28 j 14:35 29°**8**07'39 0°17'11 -4682 May 18 j 05:27 0° 8 -4676 Jul 12 j 13:25 $0^{\circ}\Pi$ max. Earth dist. -4682 May 29 j 11:45 0°**8**41'25 19.54507 AU retrograde -4676 Oct 14 j 07:17 3°**Ⅲ**30′36 -4676 Dec 26 j 11:23 1°II28'38 0°21'07 opposition -4682 May 30 j 18:27 0°846'08 0°-7'-44 min. Earth dist. -4676 Dec 27 j 14:19 1°**II**25'42 17.32017 AU conjunction

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, page 16 Attention, astronomical year style is used: The year -4675 in astronomical counting style is the year 4676 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -4675	in astronomical cou	inting style is the year	4676 BCE in historical of	counting style	
	-4675 Feb 02 j 02:53	30°R₩		opposition	-4667 Feb 03 j 06:18	9°5546'13	0°49'00
direct	-4675 Mar 12 j 21:46	29° 8 22'11		min. Earth dist.	-4667 Feb 04 j 00:23	9° 5 44'17	17.33407 AU
	-4675 Apr 20 j 00:26	Π °0		direct	-4667 Apr 21 j 10:28	7°5540'04	
max. Earth dist.	-4675 Jul 02 j 11:04	3° Ⅱ 50′04	19.31063 AU				
				conjunction	-4667 Aug 11 j 10:35		0°44'57
conjunction	-4675 Jul 03 j 18:18	3° ∏ 54'59		minimum elong	-4667 Aug 11 j 10:35		0°45'11
minimum elong	-4675 Jul 03 j 18:18	3° Ⅱ 54'59	0°21'08	max. Earth dist.	-4667 Aug 10 j 16:09		19.34747 AU
retrograde	-4675 Oct 19 j 07:18	8° I 18'05	0005105	retrograde	-4667 Nov 26 j 06:39		0051100
opposition	-4675 Dec 31 j 12:42	6° Ⅱ 16'09		opposition	-4666 Feb 08 j 09:23		
min. Earth dist.	-4674 Jan 01 j 16:17		17.30328 AU	min. Earth dist.	-4666 Feb 09 j 01:32		17.36306 AU
direct	-4674 Mar 17 j 23:58	4° Ⅱ 09'39		direct	-4666 Apr 26 j 14:36	12-9025-02	
conjunction	-4674 Jul 08 j 21:51	8° Ⅱ 42'47	0°24'42	conjunction	-4666 Aug 16 j 09:54	16º955'19	0°46'43
minimum elong	-4674 Jul 08 j 21:51	8° I I42'47		minimum elong	-4666 Aug 16 j 09:54		0°46'57
max. Earth dist.	-4674 Jul 07 j 14:52		19.29612 AU	max. Earth dist.	-4666 Aug 15 j 16:51		
retrograde	-4674 Oct 24 j 08:38			retrograde	-4666 Dec 01 j 05:56		
opposition	-4673 Jan 05 j 14:12		0°29'33	opposition	-4665 Feb 13 j 12:11		0°52'57
min. Earth dist.	-4673 Jan 06 j 16:16			min. Earth dist.	-4665 Feb 14 j 02:17	19° © 13'14	17.39811 AU
direct	-4673 Mar 23 j 04:56	8° Ⅱ 57'29		direct	-4665 May 01 j 17:23	17° 5 09'09	
max. Earth dist.	-4673 Jul 12 j 19:46	13° Ⅱ 26′09	19.28633 AU				
				conjunction	-4665 Aug 21 j 08:40	21°538'32	0°48'11
conjunction	-4673 Jul 14 j 01:18			minimum elong	-4665 Aug 21 j 08:40		
minimum elong	-4673 Jul 14 j 01:18		0°28'32	max. Earth dist.	-4665 Aug 20 j 18:49		19.41741 AU
retrograde	-4673 Oct 29 j 08:11			retrograde	-4665 Dec 06 j 05:44		
opposition	-4672 Jan 10 j 16:23			opposition	-4664 Feb 18 j 15:05		
min. Earth dist.	-4672 Jan 11 j 18:42		17.28382 AU	min. Earth dist.	-4664 Feb 19 j 02:51		17.43834 AU
direct	-4672 Mar 27 j 08:45			direct	-4664 May 05 j 21:27	21° © 52'21	
max. Earth dist.	-4672 Jul 16 j 22:58	18°Щ14'11	19.28170 AU		1664 1 25:06:20	260520140	0040110
. ,.	4670 I I 10:04 10	100110140	0021142	conjunction	-4664 Aug 25 j 06:30		0°49'18
conjunction	-4672 Jul 18 j 04:10			minimum elong	-4664 Aug 25 j 06:30		0°49'31
minimum elong	-4672 Jul 18 j 04:10 -4672 Nov 02 j 08:42		0°31′3/	max. Earth dist.	-4664 Aug 24 j 18:22	26°2018'46 0°Ω	19.46007 AU
retrograde opposition	-4671 Jan 14 j 18:45		0°37'00	retrograde	-4664 Nov 01 j 16:40 -4664 Dec 10 j 04:00	0° Ω 40'32	
min. Earth dist.	-4671 Jan 15 j 19:07			Tetrograde	-4663 Jan 19 j 00:21		
direct	-4671 Apr 01 j 14:53		17.20104 AU	opposition	-4663 Feb 22 j 17:53		0°55'26
max. Earth dist.	-4671 Jul 22 j 04:01		19 28249 AU	min. Earth dist.	-4663 Feb 23 j 03:55		
man zam ust.	.0/10ai 22 j 001	20 202 17	19.202 19 110	direct	-4663 May 10 j 23:02		17.10320110
conjunction	-4671 Jul 23 j 06:45	23° I I06'31	0°34'53		-4663 Aug 13 j 17:38		
minimum elong	-4671 Jul 23 j 06:45				C ,		
retrograde	-4671 Nov 07 j 07:56			conjunction	-4663 Aug 30 j 03:45	1° Ω 01'39	0°50'06
opposition	-4670 Jan 19 j 21:31	25° Ⅱ 27'26	0°40'34	minimum elong	-4663 Aug 30 j 03:45	1° Ω 01'39	0°50'19
min. Earth dist.	-4670 Jan 20 j 21:26	25° Ⅱ 24'51	17.28553 AU	max. Earth dist.	-4663 Aug 29 j 18:30	1° Ω 00′12	19.50708 AU
direct	-4670 Apr 06 j 19:32	23° Ⅱ 20'54		retrograde	-4663 Dec 15 j 03:44	5° Ω 20'53	
max. Earth dist.	-4670 Jul 27 j 06:27	27° Ⅱ 49'37	19.28923 AU	opposition	-4662 Feb 27 j 20:15	3° Ω 19'51	0°56'07
				min. Earth dist.	-4662 Feb 28 j 03:36		17.53206 AU
conjunction	-4670 Jul 28 j 08:30	27° I 53'45		direct	-4662 May 16 j 02:53	1° Ω 15′22	
minimum elong	-4670 Jul 28 j 08:30	27° I 53'45	0°38'04		4662.6 041.00.00	50 0 4	0050122
	-4670 Aug 31 j 19:35	0°ഇ 2° ഇ 16'17		conjunction	-4662 Sep 04 j 00:08 -4662 Sep 04 j 00:08	5° Ω 41'17	0°50'33 0°50'46
retrograde opposition	-4670 Nov 12 j 08:10 -4669 Jan 25 j 00:18	0°9514'24	0942142	minimum elong max. Earth dist.	-4662 Sep 03 j 16:48	5° Ω 41'17	19.55756 AU
min. Earth dist.	-4669 Jan 25 j 21:58		17.29532 AU	retrograde	-4662 Dec 20 j 00:17	9° Ω 59'53	19.55/50 AU
iiiii. Eartii dist.	-4669 Jan 30 j 14:12	0 €12 04 30°R∏	17.29332 AU	opposition	-4661 Mar 04 j 22:25	7° Ω 58'58	0°56'26
direct	-4669 Apr 12 j 01:27	28° I 07'56		min. Earth dist.	-4661 Mar 05 j 04:25	7° Ω 58'20	17.58414 AU
uncer	-4669 Jun 18 j 09:13	0°95		direct	-4661 May 21 j 03:44	5° Ω 54'51	17.30414710
max. Earth dist.	-4669 Aug 01 j 10:59		19.30212 AU	uncet	1001 May 21 J 05.11	3 003 131	
				conjunction	-4661 Sep 08 j 19:44	10° Ω 19'26	0°50'40
conjunction	-4669 Aug 02 j 09:56	2°540'20	0°40'29	minimum elong	-4661 Sep 08 j 19:44		0°50'51
minimum elong	-4669 Aug 02 j 09:55	2°540'20	0°40'43	max. Earth dist.	-4661 Sep 08 j 14:46		
retrograde	-4669 Nov 17 j 07:10	7° 5 02'31		retrograde	-4661 Dec 24 j 22:45		
opposition	-4668 Jan 30 j 03:15	5°500'42	0°46'31	opposition	-4660 Mar 09 j 00:02	12° Ω 36'31	0°56'22
min. Earth dist.	-4668 Jan 30 j 23:43	4°958'30	17.31136 AU	min. Earth dist.	-4660 Mar 09 j 03:02	12° Ω 36′12	17.63878 AU
direct	-4668 Apr 16 j 06:00	2° 9 54'21		direct	-4660 May 25 j 07:22	10° Ω 32'47	
conjunction	-4668 Aug 06 j 10:35	7° 5 26'10	0°42'52	conjunction	-4660 Sep 12 j 14:30		0°50'28
minimum elong	-4668 Aug 06 j 10:35	7°526'10	0°43'06	minimum elong	-4660 Sep 12 j 14:30		0°50'39
max. Earth dist.	-4668 Aug 05 j 12:42		19.32151 AU	max. Earth dist.	-4660 Sep 12 j 11:49		19.66689 AU
retrograde	-4668 Nov 21 j 07:12	47'59في 11			-4660 Sep 13 j 16:35	15,95	

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4660 in astronomical counting style is the year 4661 BCE in historical counting style. retrograde -4660 Dec 28 i 17:33 19° Ω 13'04 retrograde -4651 Feb 02 i 11:13 24° mp 47'27 -4659 Mar 14 j 01:21 $17^{\circ}\Omega$ 12'21 $0^{\circ}55'56$ -4651 Apr 20 j 09:38 22° mp 47'19 0°41'07 opposition opposition min. Earth dist. min. Earth dist. -4659 Mar 14 j 03:07 17°Ω12'10 17.69579 AU -4651 Apr 19 j 16:51 22° mp 49'02 18.22174 AU -4659 May 30 j 07:10 $15^{\circ}\Omega$ 08'58 -4651 Jul 06 j 06:36 20° mp 47'03 direct direct -4659 Sep 17 j 08:15 19° **Ω**30'36 0°49'56 -4651 Oct 21 j 22:23 24° m 55'47 0°35'44 conjunction conjunction -4659 Sep 17 j 08:15 19°Ω30'36 0°50'05 -4651 Oct 21 j 22:23 24° m 55'47 0°35'47 minimum elong minimum elong -4659 Sep 17 j 07:39 19° **Ω**30'30 19.72501 AU -4651 Oct 22 j 16:08 24° m 58'28 20.25734 AU max. Earth dist. max. Earth dist. -4658 Jan 02 j 14:19 23° **\Omega**46'57 -4650 Feb 07 j 03:39 29° Mp 05'40 retrograde retrograde -4650 Apr 24 j 08:57 27° m 07'37 18.29285 AU opposition -4658 Mar 19 j 01:50 $21^{\circ}\Omega$ 46'18 $0^{\circ}55'08$ min. Earth dist. min. Earth dist. -4658 Mar 19 j 00:23 21°Ω46'27 17.75478 AU opposition -4650 Apr 25 j 04:16 27° Mg 05'39 0°38'07 -4658 Jun 04 j 09:28 19°**Ω**43'16 -4650 Jul 10 j 23:28 25° m 05'50 direct direct -4650 Oct 26 j 08:51 29° mg 13'03 conjunction -4658 Sep 22 j 01:10 24°Ω03'20 0°49'05 conjunction 0°32'58 minimum elong -4658 Sep 22 j 01:10 24° Ω03'20 0°49'14 minimum elong -4650 Oct 26 j 08:51 29° m 13'03 0°32'59 max. Earth dist. -4658 Sep 22 j 03:13 24°**Ω**03'39 19.78494 AU max. Earth dist. -4650 Oct 27 j 05:25 29° Mp 16'09 20.32800 AU retrograde -4657 Jan 07 j 07:14 $28^{\circ}\Omega$ 18'52 -4650 Nov 08 j 09:32 0∘<u>ଫ</u> opposition -4657 Mar 24 j 01:41 26° **Ω**18'15 0°54'01 retrograde -4649 Feb 11 j 16:50 3°**₽**22'11 min. Earth dist. -4657 Mar 23 j 23:05 26° Ω18'31 17.81571 AU opposition -4649 Apr 29 j 22:10 1°**≏**22'19 0°34'55 direct -4657 Jun 09 j 07:49 $24^{\circ}\Omega$ 15'34 min. Earth dist. -4649 Apr 29 j 01:50 1°**£**24'23 18.36296 AU -4649 Jun 06 j 05:42 30°R M conjunction -4657 Sep 26 j 17:04 $28^{\circ}\Omega$ 34'01 $0^{\circ}47'57$ direct -4649 Jul 15 i 15:02 29° m 22'57 minimum elong $-4657 \text{ Sep } 26 \text{ i } 17:04 \quad 28^{\circ} \Omega 34'01$ 0°48'05 -4649 Aug 22 j 18:09 0∘**⊽** max. Earth dist. -4657 Sep 26 j 21:03 28° Ω34'38 19.84696 AU -4657 Oct 20 i 05:49 0° m conjunction -4649 Oct 30 i 18:37 3°**₽**28'40 0°30'01 -4656 Jan 12 j 02:29 2° m 48'43 -4649 Oct 30 j 18:37 3°**£**28'41 0°30'00 retrograde minimum elong opposition -4656 Mar 28 j 00:52 0°m/48'08 0°52'34 max. Earth dist. -4649 Oct 31 j 15:44 3°**2**31'51 20.39746 AU min. Earth dist. -4656 Mar 27 j 18:49 0° Mp 48'45 17.87869 AU -4648 Feb 16 j 07:48 retrograde 7°**£**37'06 -4656 Apr 16 j 23:12 30°RΩ -4648 May 03 j 15:24 opposition 5°**2**37'20 0°31'32 -4656 Jun 13 j 07:18 28° **Ω**45'47 min. Earth dist. -4648 May 02 j 17:08 direct 5°**2**39'35 18.43160 AU -4656 Aug 06 j 13:58 -4648 Jul 19 j 06:22 direct 3°**₽**38'22 0° m -4656 Sep 30 j 07:58 3° m 02'35 0°46'31 -4648 Nov 03 j 03:54 conjunction conjunction 7°**2**42'40 0°26'55 -4648 Nov 03 j 03:54 -4656 Sep 30 j 07:58 3° m 02'35 0°46'38 minimum elong minimum elong 7°**£**42'40 0°26'54 -4656 Sep 30 j 15:09 3°m/03'41 19.91095 AU -4648 Nov 04 j 03:32 7°**2**46'12 20.46492 AU max. Earth dist. max. Earth dist. -4655 Jan 15 j 18:28 7° m 16'27 -4647 Feb 19 j 20:15 11°**⊆**50'23 retrograde retrograde -4655 Apr 01 j 23:29 5° To 15'55 0°50'49 -4647 May 07 j 08:47 9°**⊆**53'04 18.49781 AU opposition min. Earth dist. min. Earth dist. -4655 Apr 01 j 16:00 5° Mp 16'41 17.94381 AU opposition -4647 May 08 j 07:54 9°**£**50'44 0°28'01 direct -4655 Jun 18 j 03:53 3° m 13'56 direct -4647 Jul 23 j 20:38 7°**£**52'09 conjunction -4655 Oct 04 j 22:01 7° m 29'04 0°44'50 conjunction -4647 Nov 07 j 12:38 11°**£**55'03 0°23'41 -4655 Oct 04 j 22:02 7° m 29'04 0°44'57 -4647 Nov 07 j 12:38 11°**♀**55'03 0°23'39 minimum elong minimum elong max. Earth dist. -4655 Oct 05 j 06:58 7° m/30'27 19.97719 AU max. Earth dist. -4647 Nov 08 j 12:20 11°**⊆**58'35 20.52975 AU -4654 Jan 20 j 12:26 11° Mp 42'06 -4646 Feb 24 j 09:29 16°**♀**02'05 retrograde retrograde -4654 Apr 06 j 20:59 9° Mp 41'38 0°48'46 -4646 May 12 j 23:25 14°**♀**02'29 0°24'22 opposition opposition 9° m 42'45 18.01110 AU min. Earth dist. -4654 Apr 06 i 10:05 min. Earth dist. -4646 May 11 j 23:01 14° **2**04'57 18.56121 AU -4646 Jul 28 j 10:11 12°**♀**04'14 -4654 Jun 23 i 00:21 direct 7° m 40'02 direct -4654 Oct 09 j 11:21 11° m 53'33 0°42'54 -4646 Nov 11 j 20:56 16° **2**05'49 0° 20'21 conjunction conjunction minimum elong -4654 Oct 09 i 11:21 11° m 53'33 0°42'59 minimum elong -4646 Nov 11 i 20:57 16° \(\Omega\)05'49 0°20'19 max. Earth dist. -4654 Oct 09 j 23:29 11° mp 55'24 20.04538 AU max. Earth dist. -4646 Nov 12 j 22:47 16°**♀**09'39 20.59145 AU -4653 Jan 25 j 03:38 16° m 05'45 retrograde -4645 Feb 28 j 21:04 20° **2**12'11 retrograde -4653 Apr 11 j 17:58 14° mp 05'22 0°46'28 -4645 May 17 j 14:17 18° **2**12'38 0°20'36 opposition opposition min. Earth dist. -4653 Apr 11 j 05:38 14° Mp 06'38 18.08016 AU min. Earth dist. -4645 May 16 j 13:05 18° **2**15'10 18.62122 AU -4653 Jun 27 j 19:04 12° m 04'13 direct direct -4645 Aug 01 j 23:16 16° **2**14'41 conjunction -4653 Oct 13 j 23:40 16° Mp 16'06 0°40'44 conjunction -4645 Nov 16 j 04:24 20°**2**14'57 0°16'56 -4653 Oct 13 j 23:40 16° Mp 16'06 0°40'48 -4645 Nov 16 j 04:24 20°**£**14'57 0°16'52 minimum elong minimum elong -4653 Oct 14 j 13:15 16° Mp 18'10 20.11525 AU -4645 Nov 17 j 06:12 20°**2**18'46 20.64985 AU max. Earth dist. max. Earth dist. -4652 Jan 29 j 20:57 20° M 27'31 -4644 Mar 04 j 08:33 24°**£**20'42 retrograde retrograde -4644 May 20 j 02:15 22°**2**23'46 18.67806 AU opposition -4652 Apr 15 j 14:08 18° m 27'14 0°43'55 min. Earth dist. min. Earth dist. -4652 Apr 14 j 22:39 18° Mp 28'49 18.15062 AU opposition -4644 May 21 j 04:25 22°**2**21'09 0°16'46 direct -4652 Jul 01 j 13:29 16° Mp 26'31 direct -4644 Aug 05 j 11:10 20°**£**23'28 conjunction -4652 Oct 17 j 11:28 20° m 36'49 0°38'20 conjunction -4644 Nov 19 j 11:37 24°**£**22'30 0°13'28 minimum elong -4652 Oct 17 j 11:28 20° m 36'49 0°38'23 -4644 Nov 19 j 11:37 24°**£**22'30 minimum elong

behind sun begin

-4644 Nov 19 j 07:47 24°**2**21'57

max. Earth dist.

-4652 Oct 18 j 04:11 20° m 39'22 20.18611 AU

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4644 in astronomical counting style is the year 4645 BCE in historical counting style. behind sun end -4644 Nov 19 i 15:28 24°**2**23'03 behind sun end -4638 Dec 14 i 04:30 18°ML41'04 max. Earth dist. -4644 Nov 20 j 15:33 24° **2**26'36 20.70504 AU max. Earth dist. -4638 Dec 15 j 06:43 18° ML44'52 20.97751 AU -4643 Mar 08 j 19:17 28° **2**27'37 -4637 Apr 03 j 01:53 22° ML42'44 retrograde retrograde -4637 Jun 19 j 03:23 20°M-46'24 18.99550 AU opposition -4643 May 25 i 17:31 26° **2**28'04 0°12'52 min. Earth dist. $\hbox{-}4637 \ Jun \ \ 20 \ \hbox{j} \ 09{:}43 \ \ \ 20° \hbox{\it IL}43'23$ -4643 May 24 j 14:30 26° **2**30'47 18.73173 AU min. Earth dist. opposition 0°-10'-40 -4643 Aug 09 j 22:56 24°**♀**30'37 -4637 Sep 04 j 01:35 18°ML47'12 direct direct -4643 Nov 23 j 18:09 28°**♀**28'29 -4637 Dec 18 j 03:41 22°ML40'03 0°-11'-22 conjunction 0°09'57 conjunction -4637 Dec 18 j 03:41 22°M-40'03 -4643 Nov 23 j 18:09 28°**£**28'29 minimum elong 0°09'51 minimum elong 0°11'33 behind sun begin -4643 Nov 23 j 12:47 28°**£**27'43 behind sun begin -4637 Dec 17 j 22:56 22°M39'23 behind sun end -4643 Nov 23 j 23:32 28°**£**29'15 behind sun end -4637 Dec 18 j 08:26 22° 11.40'43 -4637 Dec 19 j 10:50 22°ML44'32 21.01169 AU max. Earth dist. -4643 Nov 24 j 21:56 28°**⊆**32'34 20.75729 AU max. Earth dist. -4636 Apr 06 j 10:44 26°M42'20 -4643 Dec 20 j 09:06 0°M retrograde retrograde -4642 Mar 13 j 05:03 2°M33'03 opposition -4636 Jun 23 j 18:36 24°M.43'01 0°-14'-28 min. Earth dist. -4642 May 29 j 02:14 0°**M**J36'15 18.78270 AU min. Earth dist. -4636 Jun 22 j 12:56 24° ML45'59 19.02763 AU opposition -4642 May 30 j 05:56 0°M33'29 0°08'57 direct -4636 Sep 07 j 06:54 22°ML47'01 -4642 Jun 13 j 08:29 30°**₹**Ω direct -4642 Aug 14 j 08:42 28°**೨**36'15 conjunction -4636 Dec 21 j 09:06 26°M39'22 0°-14'-46 -4642 Oct 11 j 17:18 minimum elong -4636 Dec 21 j 09:06 26°M39'22 0°14'58 behind sun begin -4636 Dec 21 j 06:34 26° M 39'01 conjunction -4642 Nov 28 j 00:25 2°MJ33'03 0°06'24 behind sun end -4636 Dec 21 j 11:39 26°M39'43 minimum elong -4642 Nov 28 i 00:24 2°M33'03 0°06'16 max. Earth dist. -4636 Dec 22 j 17:11 26° ML43'58 21.04149 AU behind sun begin -4642 Nov 27 j 18:12 2°M32'10 -4635 Feb 27 i 23:46 0°**∡**¹ behind sun end -4642 Nov 28 i 06:37 2°M33'56 retrograde -4635 Apr 10 i 18:51 0°**х** 41′25 max. Earth dist. -4642 Nov 29 j 06:13 2°M37'24 20.80679 AU -4635 May 23 j 17:37 30°RML -4641 Mar 17 j 14:46 6°MJ37'04 min. Earth dist. -4635 Jun 26 i 21:01 28°M-45'08 19.05496 AU retrograde opposition -4641 Jun 03 j 17:31 4°ML37'31 0°05'00 -4635 Jun 28 j 02:44 28°M-42'10 0°-18'-12 opposition -4641 Jun 02 j 12:49 4°ML40'24 18.83090 AU direct -4635 Sep 11 j 13:46 26° ML46'18 min. Earth dist. -4641 Aug 18 j 19:07 2°M40'31 -4635 Dec 14 j 10:48 0°×7 direct -4641 Dec 02 j 06:12 6°MJ36'20 0°02'50 -4635 Dec 25 j 14:26 0°**х** 38'14 0°-18'-6 conjunction conjunction -4641 Dec 02 j 06:12 -4635 Dec 25 j 14:26 minimum elong 6°M36′20 0°02'43 minimum elong 0° **₹**38'14 0°18'19 -4641 Dec 01 j 23:39 -4635 Dec 26 j 20:57 behind sun begin 6°M35'25 max. Earth dist. 0° **₹**42'36 21.06625 AU -4641 Dec 02 j 12:44 -4634 Apr 15 j 03:11 4°**∡**°40′09 behind sun end 6°MJ37'16 retrograde -4641 Dec 03 j 11:44 6°M40'38 20.85376 AU -4634 Jul 01 j 06:17 2°**х** 43'45 19.07708 AU max. Earth dist. min. Earth dist. 2°**∡**140'55 0°-21'-51 -4640 Mar 20 j 23:54 10°M39'55 -4634 Jul 02 j 10:43 retrograde opposition -4640 Jun 05 j 23:26 -4634 Sep 15 j 18:02 min. Earth dist. 8°ML43'17 18.87669 AU direct 0°**х** 45′08 opposition -4640 Jun 07 j 04:33 8°M40'23 0°01'03 direct -4640 Aug 22 j 02:52 6°M43'35 conjunction -4634 Dec 29 j 19:54 4°**∡**136'44 0°-21'-21 desc. node -4640 Sep 12 j 21:08 6°M55'48 minimum elong -4634 Dec 29 j 19:54 4°**х** 36'44 0°21'34 max. Earth dist. -4634 Dec 31 j 02:52 4°**尽**41'09 21.08547 AU -4640 Dec 05 j 11:52 10°M 38'31 0°00'-49 retrograde -4633 Apr 19 j 11:26 8°**∡**38'31 conjunction -4640 Dec 05 j 11:52 10°M38'31 -4633 Jul 06 j 18:14 6°**∡**39'17 0°-25'-22 minimum elong 0°00'59 opposition -4640 Dec 05 j 05:19 10°M37'36 min. Earth dist. -4633 Jul 05 j 13:59 6°**₹**42'07 19.09334 AU behind sun begin -4640 Dec 05 j 18:25 10°M39'27 direct -4633 Sep 20 j 00:50 4°**х¹**43'33 behind sun end -4640 Dec 06 j 19:11 10°ML43'04 20.89812 AU max. Earth dist. -4639 Mar 25 i 08:44 14° ML41'40 -4632 Jan 03 j 01:26 8°**∡**34'53 0°-24'-29 retrograde conjunction -4639 Jun 10 j 08:55 12° ML 45'11 18.91956 AU min. Earth dist. minimum elong -4632 Jan 03 i 01:26 8°**х** 34′53 0°24′43 opposition -4639 Jun 11 j 14:51 12°M-42'11 0°-2'-53 max. Earth dist. -4632 Jan 04 i 06:27 8° ₹39'01 21.09883 AU direct -4639 Aug 26 j 11:43 10°ML45'37 retrograde -4632 Apr 22 j 19:20 12° ₹36'36 min. Earth dist. -4632 Jul 08 i 22:52 10° ₹39'58 19.10381 AU -4639 Dec 09 j 17:15 14°M 39'46 0°-4'-24 -4632 Jul 10 j 01:28 10° ₹37'18 0°-28'-46 conjunction opposition 8°**∡**¹41'33 -4639 Dec 09 j 17:15 14°M 39'46 0°04'34 direct -4632 Sep 23 j 04:51 minimum elong -4639 Dec 09 j 10:49 14°M38'52 behind sun begin behind sun end -4639 Dec 09 j 23:41 14°M.40'40 conjunction -4631 Jan 06 j 07:15 12° ₹ 32'42 0°-27'-30 max. Earth dist. -4639 Dec 10 j 23:55 14°ML44'12 20.93947 AU minimum elong -4631 Jan 06 j 07:15 12° ₹ 32'42 0°27'43 -4639 Dec 15 j 13:08 15°ML max. Earth dist. -4631 Jan 07 j 12:24 12° ₹ 36'51 21.10636 AU -4638 Mar 29 j 17:45 18° 11.42'34 -4631 Apr 27 j 03:29 16° ₹34'22 retrograde retrograde -4638 Jun 14 j 18:43 16°ML46'07 18.95937 AU -4631 Jul 13 j 05:57 14° ₹ 37'38 19.10839 AU min. Earth dist. min. Earth dist. -4638 Jun 16 j 00:31 16°ML43'08 0°-6'-47 -4631 Jul 14 j 08:13 14°**尽** 35'00 0°-32'-2 opposition opposition -4638 Aug 07 j 16:20 15°RML direct -4631 Sep 27 j 11:04 12° ₹39'11 direct -4638 Aug 30 j 18:05 14°ML46'46 -4638 Sep 22 j 09:29 15°M conjunction -4630 Jan 10 j 12:59 16° ₹30'14 0°-30'-22 minimum elong -4630 Jan 10 j 12:59 16° **₹** 30'14 0°30'37 conjunction -4638 Dec 13 j 22:37 18°ML40'14 0°-7'-54 max. Earth dist. -4630 Jan 11 j 16:03 16° ₹34'05 21.10823 AU -4638 Dec 13 j 22:38 18° ML40'14 0°08'05 -4630 May 01 j 10:55 20° ₹31'54 minimum elong retrograde

opposition

-4630 Jul 18 j 14:39 18° ₹32'26 0°-35'-7

behind sun begin

-4638 Dec 13 j 16:46 18°M39'25

2	ical year style is used: Tl			· //		/ 1	age 19
min. Earth dist.	-4630 Jul 17 j 14:09	-		min. Earth dist.	-4622 Aug 18 j 22:35		
direct	-4630 Oct 01 j 15:09		19.10//1 AU	direct	-4622 Nov 02 j 01:34		18.93440 AU
direct	-4030 Oct 01 j 13.09	10 × 30 30		direct	-4022 NOV 02 J 01.34	18 023 23	
conjunction	-4629 Jan 14 j 19:02	200 727134	0° 33' 6	conjunction	-4621 Feb 16 j 08:20	220天18113	0°-48'-20
minimum elong	-4629 Jan 14 j 19:02			minimum elong	-4621 Feb 16 j 08:20		0°48'35
max. Earth dist.	-4629 Jan 15 j 22:14			max. Earth dist.	-4621 Feb 17 j 00:20		
	3		21.10313 AU		•		20.93613 AU
retrograde	-4629 May 05 j 18:56		00 201 2	retrograde	-4621 Jun 07 j 18:39		0°-54'-2
opposition	-4629 Jul 22 j 20:44			opposition	-4621 Aug 23 j 18:42		
min. Earth dist.	-4629 Jul 21 j 20:28		19.10225 AU	min. Earth dist.	-4621 Aug 23 j 05:37		18.91/12 AU
direct	-4629 Oct 05 j 20:24	20° × '33'40		direct	-4621 Nov 06 j 08:12	22°625'16	
conjunction	-4628 Jan 19 j 01:04	240.724140	0°-35'-39	conjunction	-4620 Feb 20 j 18:36	260₹20156	0°-49'-17
minimum elong	-4628 Jan 19 j 01:03		0°35'54	minimum elong	-4620 Feb 20 j 18:36		0°49'31
max. Earth dist.	-4628 Jan 20 j 02:13			max. Earth dist.	-4620 Feb 21 j 07:20		
	-4628 May 09 j 02:26		21.09/31 AU	max. Earth dist.	-4620 May 09 j 13:05	20 O 22 43	20.89041 AU
retrograde min. Earth dist.	-4628 Jul 25 j 04:15		10.00250 ATT	ratra ara da	-4620 Jun 11 j 04:07	0 ≈ 0°≈25'50	
	3		0°-40'-47	retrograde	-4620 Jul 14 j 01:12		
opposition	-4628 Jul 26 j 02:44 -4628 Oct 09 j 00:16		0 -40 -47		-4620 Aug 27 j 01:08		00 541 57
direct	-4628 Oct 09 J 00:16	24° X '30'4/		opposition	• •		
	4607 1 20:07 42	200 722100	00 201 2	min. Earth dist.	-4620 Aug 26 j 15:02		18.8/490 AU
conjunction	-4627 Jan 22 j 07:42		0°-38'-3	direct	-4620 Nov 09 j 12:52		
minimum elong	-4627 Jan 22 j 07:42	28° 🖈 22'09	0°38'18		-4619 Feb 16 j 23:58	0° ≈	
max. Earth dist.	-4627 Jan 23 j 08:50		21.08582 AU		4610 71 24:05 40	00 0440	00 401 50
	-4627 Feb 20 j 20:22	0°る		conjunction	-4619 Feb 24 j 05:49	0°≈24'49	0°-49'-59
retrograde	-4627 May 13 j 10:48	2°₹24'09		minimum elong	-4619 Feb 24 j 05:49	0°≈24'49	0°50'12
min. Earth dist.	-4627 Jul 29 j 10:06		19.07891 AU	max. Earth dist.	-4619 Feb 24 j 17:03		20.85184 AU
opposition	-4627 Jul 30 j 08:15	0°る24'23	0°-43'-20	retrograde	-4619 Jun 15 j 15:23	4° ≈ 30'15	
	-4627 Aug 09 j 10:42	30°R ✓		opposition	-4619 Aug 31 j 07:32	2° ≈ 30'02	0°-55'-36
direct	-4627 Oct 13 j 05:05	28° ∡ ¹28'05		min. Earth dist.	-4619 Aug 30 j 22:37		18.82789 AU
	-4627 Dec 13 j 18:57	0° ප		direct	-4619 Nov 13 j 20:20	0° ≈ 32'11	
	1606 7 06:1100	20710146	00.401.16		4610 7 1 20 1 1 7 20	40 20140	00 501 06
conjunction	-4626 Jan 26 j 14:28	2°₹19'46	0°-40'-16	conjunction	-4618 Feb 28 j 17:28	4°≈29'49	0°-50'-26
minimum elong	-4626 Jan 26 j 14:28	2°る19'46	0°40'30	minimum elong	-4618 Feb 28 j 17:28	4°≈29'49	0°50'39
max. Earth dist.	-4626 Jan 27 j 13:21		21.07028 AU	max. Earth dist.	-4618 Mar 01 j 01:18		20.80250 AU
retrograde	-4626 May 17 j 18:30	6° පි 22'01		retrograde	-4618 Jun 20 j 01:35	8° ≈ 35'51	
opposition	-4626 Aug 03 j 13:57	4° ට 22'11	0°-45'-41	opposition	-4618 Sep 04 j 14:29	6°≈35'29	0°-55'-57
min. Earth dist.	-4626 Aug 02 j 17:44		19.06157 AU	min. Earth dist.	-4618 Sep 04 j 08:33		18.77639 AU
direct	-4626 Oct 17 j 08:21	2° る 25'44		direct	-4618 Nov 18 j 02:17	4° ≈ 37'16	
. ,.	4605 X 20 : 21 27	60715150	00 421 10	. ,.	461734 05:05.47	0025150	00 501 27
conjunction	-4625 Jan 30 j 21:37		0°-42'-18	conjunction	-4617 Mar 05 j 05:47	8°≈35'58	0°-50'-37
minimum elong	-4625 Jan 30 j 21:37	6°る17'50		minimum elong	-4617 Mar 05 j 05:47	8°≈35'58	0°50'49
max. Earth dist.	-4625 Jan 31 j 20:24		21.05113 AU	max. Earth dist.	-4617 Mar 05 j 12:11		20.74906 AU
retrograde	-4625 May 22 j 03:57			retrograde	-4617 Jun 24 j 13:07		
opposition	-4625 Aug 07 j 19:31		0°-47'-49	opposition	-4617 Sep 08 j 21:32	10° ≈ 42'04	
min. Earth dist.	-4625 Aug 06 j 23:40		19.04053 AU	min. Earth dist.	-4617 Sep 08 j 16:40		18.72099 AU
direct	-4625 Oct 21 j 13:34	6° る 23'56		direct	-4617 Nov 22 j 10:34	8° ≈ 43'28	
conjunction	-4624 Feb 04 j 05:19			conjunction	-4616 Mar 08 j 18:49		0°-50'-33
minimum elong	-4624 Feb 04 j 05:19		0°44'22	minimum elong	-4616 Mar 08 j 18:50		0°50'45
max. Earth dist.	-4624 Feb 05 j 01:40		21.02832 AU	max. Earth dist.	-4616 Mar 08 j 22:01		20.69199 AU
retrograde	-4624 May 25 j 11:59				-4616 Apr 19 j 15:19		
min. Earth dist.	-4624 Aug 10 j 07:37			retrograde	-4616 Jun 27 j 23:48		
opposition	-4624 Aug 11 j 01:09		0°-49'-44		-4616 Sep 08 j 03:38		
direct	-4624 Oct 24 j 16:23	10° ℃ 22'51		opposition	-4616 Sep 12 j 04:56		0°-55'-50
		_		min. Earth dist.	-4616 Sep 12 j 03:04		18.66245 AU
conjunction	-4623 Feb 07 j 13:47			direct	-4616 Nov 25 j 17:50		
minimum elong	-4623 Feb 07 j 13:47		0°46'00		-4615 Feb 07 j 20:35	15° ≈	
max. Earth dist.	-4623 Feb 08 j 09:35		21.00178 AU				
retrograde	-4623 May 29 j 22:49			conjunction	-4615 Mar 13 j 08:43		
opposition	-4623 Aug 15 j 06:47			minimum elong	-4615 Mar 13 j 08:44		
min. Earth dist.	-4623 Aug 14 j 14:00		18.98725 AU	max. Earth dist.	-4615 Mar 13 j 10:27		20.63218 AU
direct	-4623 Oct 28 j 22:15	14° පි 22'38		retrograde	-4615 Jul 02 j 12:09		
				opposition	-4615 Sep 16 j 12:40		0°-55'-20
conjunction	-4622 Feb 11 j 22:36		0°-47'-10	min. Earth dist.	-4615 Sep 16 j 11:43		18.60141 AU
minimum elong	-4622 Feb 11 j 22:36			direct	-4615 Nov 30 j 03:01	16° ≈ 59′28	
max. Earth dist.	-4622 Feb 12 j 15:36	18° る 19'02	20.97110 AU				
retrograde	-4622 Jun 03 j 07:15			conjunction	-4614 Mar 17 j 23:03		0°-49'-37
opposition	-4622 Aug 19 j 12:43	20° ට 20'29	0°-52'-51	minimum elong	-4614 Mar 17 j 23:03	21° ≈ 01'46	0°49'47

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4614 in astronomical counting style is the year 4615 BCE in historical counting style. -4614 Mar 17 j 21:53 21°≈01'36 20.57011 AU minimum elong -4606 Apr 23 j 01:43 25°**)** €24'43 0°35'27 max. Earth dist. -4614 Jul 06 j 23:35 25°≈10'23 -4606 Aug 11 j 03:23 29° ¥ 39'54 retrograde retrograde opposition -4614 Sep 20 j 21:00 23°≈09'21 0°-54'-32 -4606 Oct 24 j 13:22 27° ¥38'15 0°-37'-44 opposition -4614 Sep 20 j 22:50 23°≈09'09 18.53856 AU -4606 Oct 25 j 06:13 27° ¥36'26 18.00907 AU min. Earth dist. min. Earth dist. -4614 Dec 04 j 11:17 21°≈09'30 -4605 Jan 07 j 12:44 25°**₭** 35'28 direct direct -4613 Mar 22 j 14:21 25°≈13'09 0°-48'-46 conjunction conjunction -4605 Apr 27 j 23:59 29°**米**51'38 0°-32'-30 -4613 Mar 22 j 14:22 25°≈13'09 -4605 Apr 27 j 23:59 29°**米**51'38 minimum elong 0°48'56 minimum elong 0°32'31 29°**)** 48′27 19.97484 AU -4613 Mar 22 j 11:43 25°≈12'46 20.50663 AU -4605 Apr 27 j 02:36 max. Earth dist. max. Earth dist. $0^{\circ}\Upsilon$ retrograde -4613 Jul 11 j 13:18 29°≈22'30 -4605 Apr 30 j 07:52 opposition -4613 Sep 25 j 05:34 27°≈21'19 0°-53'-27 retrograde -4605 Aug 15 j 22:48 4°**℃**07'37 -4605 Oct 29 j 03:39 2° **Y**05'53 0°-34'-24 min. Earth dist. -4613 Sep 25 j 08:14 27°≈21'02 18.47448 AU opposition -4613 Dec 08 j 21:40 25°≈21'04 -4605 Oct 29 j 21:35 direct min. Earth dist. 2°**Y**03'57 17.94071 AU direct -4604 Jan 12 j 06:05 0°Y02'41 conjunction -4612 Mar 26 j 06:27 29°≈26'08 0°-47'-38 minimum elong -4612 Mar 26 j 06:27 29°≈26'08 0°47'46 conjunction -4604 May 01 j 23:09 4°Υ'20'27 0°-29'-22 max. Earth dist. -4612 Mar 26 j 01:03 29°≈25'21 20.44204 AU minimum elong -4604 May 01 j 23:09 4°Υ20'27 0°29'23 -4612 Apr 04 j 23:49 0°**)** max. Earth dist. -4604 May 01 j 00:10 4°Υ17'00 19.90653 AU retrograde -4612 Jul 15 j 01:58 3°**)**€36'15 retrograde -4604 Aug 19 j 17:12 8°Y37'12 opposition -4612 Sep 28 j 14:59 1°**)** 34′57 0°-52'-5 opposition -4604 Nov 01 j 18:57 6°Υ35'22 0°-30'-50 1°**)** 34′23 18.40955 AU min. Earth dist. -4612 Sep 28 j 20:24 min. Earth dist. -4604 Nov 02 j 15:17 6°Υ33'09 17.87274 AU -4612 Nov 10 j 14:38 30°R≈ direct -4603 Jan 15 j 22:01 4°Υ31'45 direct -4612 Dec 12 i 06:41 29°≈34'19 -4611 Jan 12 j 16:43 0°**)**€ conjunction -4603 May 06 i 22:43 8°**Y**51′05 0°-26'-3 -4603 May 06 j 22:43 8°Y51'05 0°26'03 minimum elong -4611 Mar 30 j 23:25 3°**¥**40'52 0°-46'-15 max. Earth dist. -4603 May 05 j 21:06 8°**Υ**47'13 19.83913 AU conjunction -4611 Mar 30 j 23:25 3°¥40′52 0°46′23 -4603 Aug 24 j 13:28 13°Υ08'35 retrograde minimum elong -4611 Mar 30 j 16:20 3°**¥**39'50 20.37686 AU -4603 Nov 06 j 10:51 11°**Υ**'06'37 0°-27'-3 max. Earth dist. opposition -4611 Jul 19 j 17:23 -4603 Nov 07 j 08:03 11°**Υ**'04'18 17.80611 AU retrograde 7° ¥ 51'47 min. Earth dist. -4602 Jan 20 j 17:05 9°**Υ**02'34 -4611 Oct 03 j 00:44 5°**)** 50'24 0°-50'-24 opposition direct 5°**)**49'44 18.34407 AU -4611 Oct 03 j 06:59 min. Earth dist. 3°**)** 49′25 -4611 Dec 16 j 18:43 -4602 May 11 j 23:04 13°**Υ**23'26 0°-22'-33 conjunction direct $-4602 \text{ May } 11 \text{ j } 23:04 \quad 13^{\circ} \Upsilon 23'27 \quad 0^{\circ} 22'31$ minimum elong -4610 Apr 04 j 17:12 7°**¥**57'30 0°-44'-36 -4602 May 10 j 20:43 13°**Υ**19'27 19.77333 AU conjunction max. Earth dist. -4610 Apr 04 j 17:13 -4602 Aug 29 j 08:53 17°**Υ**41'38 minimum elong 7°**H** 57'30 0°44'43 retrograde 7°**¥**56′05 20.31116 AU -4610 Apr 04 j 07:37 -4602 Nov 11 j 03:35 15°**Υ**39'34 0°-23'-4 max. Earth dist. opposition -4610 Jul 24 j 07:19 12°**米**09'16 -4602 Nov 12 j 02:37 15°**Υ**37'03 17.74148 AU retrograde min. Earth dist. opposition -4610 Oct 07 j 11:24 10° **★** 07'50 0°-48'-27 direct -4601 Jan 25 j 10:40 13°**Y**35'08 min. Earth dist. -4610 Oct 07 j 20:27 10° **米** 06'52 18.27822 AU direct -4610 Dec 21 j 04:52 8°₩06'30 conjunction -4601 May 16 j 23:49 17°**Υ**57'29 0°-18'-53 minimum elong -4601 May 16 j 23:49 17°**Υ**57'29 0°18'51 -4609 Apr 09 j 11:53 12° **)** 16'09 0°-42'-41 max. Earth dist. -4601 May 15 j 19:04 17°**Υ**53'06 19.71007 AU conjunction -4601 Sep 03 j 05:42 22°**Υ**16'21 minimum elong retrograde -4601 Nov 15 j 21:04 20° Υ 14'10 0°-18'-55 max. Earth dist. opposition -4609 Jul 29 j 00:26 16°**∺**28'47 -4601 Nov 16 j 20:50 20°**Υ**11'34 17.67977 AU retrograde min. Earth dist. -4609 Oct 11 i 22:37 14°¥27'18 0°-46'-11 -4600 Jan 30 j 07:42 18° **Υ**09'20 opposition direct -4600 May 19 j 20:32 22°**Υ**28'44 19.64990 AU -4609 Oct 12 j 08:40 14° ★26'14 18.21194 AU min. Earth dist. max. Earth dist. -4609 Dec 25 j 18:42 12° **€**25'38 direct -4600 May 21 j 01:20 22°**Υ**'33'08 0°-15'-6 conjunction minimum elong -4608 Apr 13 i 07:40 16° **)** (36'55 0°-40'-30 -4600 May 21 i 01:19 22° √33'08 0°15'01 conjunction -4608 Apr 13 j 07:40 16° ¥ 36'55 0°40'35 behind sun begin -4600 May 20 j 23:13 22°**Υ**32'49 minimum elong -4608 Apr 12 j 17:38 16° + 34'51 20.17851 AU behind sun end -4600 May 21 j 03:26 22° Υ 33'26 max. Earth dist. -4608 Aug 01 j 15:55 20°**米** 50'24 retrograde -4600 Sep 07 j 01:49 26°**Υ**52'38 retrograde -4600 Nov 19 j 15:26 24°Υ'50'22 0°-14'-38 opposition -4608 Oct 15 j 10:42 18° **)** 48'53 0°-43'-39 opposition -4600 Nov 20 j 16:21 24°Υ47'39 17.62148 AU min. Earth dist. -4608 Oct 15 j 23:44 18° **¥**47'30 18.14497 AU min. Earth dist. -4608 Dec 29 j 06:54 16° **★** 46'52 direct -4599 Feb 03 j 03:29 22°**Y**45'13 direct max. Earth dist. -4607 Apr 17 j 11:47 20° **米** 57'20 20.11124 AU max. Earth dist. -4599 May 24 j 20:18 27°**Υ**05'38 19.59369 AU -4607 Apr 18 j 04:21 20° **★**59'47 0°-38'-5 -4599 May 26 j 03:07 27°**Υ**10'22 0°-11'-11 conjunction conjunction -4607 Apr 18 j 04:21 20° **★** 59'47 -4599 May 26 j 03:07 27°**Υ**10'22 minimum elong 0°38'08 minimum elong 0°11'07 -4607 Aug 06 j 10:17 25°**米** 14'08 -4599 May 25 j 22:08 27°**Υ**09'37 retrograde behind sun begin opposition -4607 Oct 19 j 23:34 23° ★ 12'34 0°-40'-50 behind sun end -4599 May 26 j 08:06 27°**Y**11'06 min. Earth dist. -4607 Oct 20 j 13:41 23° ★11'03 18.07734 AU -4599 Jul 14 j 23:07 0° 8 direct -4606 Jan 02 j 22:28 21° **€** 10'10 retrograde -4599 Sep 11 j 23:18 1°**8**30'29 max. Earth dist. -4606 Apr 22 j 07:04 25°**米**21'57 20.04317 AU -4599 Nov 12 j 03:38 30°R**Y** -4599 Nov 24 j 10:38 29°**Y**28'09 0°-10'-13 opposition -4606 Apr 23 j 01:43 25° **★**24'43 0°-35'-24 min. Earth dist. -4599 Nov 25 j 12:05 29°**Υ**25'23 17.56757 AU conjunction

•	ical year style is used: Th					, .	
direct	-4598 Feb 08 j 02:24			max. Earth dist.	-4592 Jun 27 j 18:17		19.33025 AU
	-4598 Apr 30 j 19:48	0°8			, and the second		
max. Earth dist.	-4598 May 29 j 23:09	1° 8 44'30	19.54199 AU	conjunction	-4592 Jun 29 j 02:06	0° Ⅱ 11′26	0°17'27
				minimum elong	-4592 Jun 29 j 02:06	0° Ⅱ 11′26	0°17'39
conjunction	-4598 May 31 j 05:23	1° 8 49'09	0°-7'-11	retrograde	-4592 Oct 14 j 19:05	4° Ⅱ 34'23	
minimum elong	-4598 May 31 j 05:22	1° 8 49'09	0°07'06	opposition	-4592 Dec 26 j 23:18	2° Ⅲ 32'22	0°21'36
behind sun begin	-4598 May 30 j 23:08	1° 8 48'13		min. Earth dist.	-4592 Dec 28 j 02:20	2° Ⅱ 29'26	17.32017 AU
behind sun end	-4598 May 31 j 11:36	1° 8 50'05		direct	-4591 Mar 13 j 09:56	0° Ⅱ 25'54	
retrograde	-4598 Sep 16 j 20:35	6° 8 09'50		max. Earth dist.	-4591 Jul 02 j 22:27	4° Ⅱ 53'40	19.31027 AU
opposition	-4598 Nov 29 j 06:40	4° 8 07'31	0°-5'-43				
min. Earth dist.	-4598 Nov 30 j 08:37		17.51820 AU	conjunction	-4591 Jul 04 j 05:57	4° Ⅱ 58'38	
direct	-4597 Feb 13 j 00:43	2° 8 01'49		minimum elong	-4591 Jul 04 j 05:57	4° Ⅱ 58'38	0°21'32
max. Earth dist.	-4597 Jun 04 j 00:11	6° 8 24'34	19.49509 AU	retrograde	-4591 Oct 19 j 18:25	9° Ⅱ 21'42	
				opposition	-4590 Jan 01 j 00:32	7° Ⅱ 19'43	
conjunction	-4597 Jun 05 j 08:06	6° 8 29'30		min. Earth dist.	-4590 Jan 02 j 04:13		17.30256 AU
minimum elong	-4597 Jun 05 j 08:05	6° 8 29'30	0°03'01	direct	-4590 Mar 18 j 12:15	5° Ⅱ 13'09	10.20505 177
behind sun begin	-4597 Jun 05 j 01:21	6° 8 28'29		max. Earth dist.	-4590 Jul 08 j 02:25	9° Ц 41'19	19.29505 AU
behind sun end	-4597 Jun 05 j 14:50	6° 8 30'31			4500 1 1 00:00 20	001147112	0025105
retrograde	-4597 Sep 21 j 18:41	10° 8 50'43	00.11.0	conjunction	-4590 Jul 09 j 09:28	9° II 46'13	
opposition	-4597 Dec 04 j 03:22	8° 8 48'25		minimum elong	-4590 Jul 09 j 09:28	9° II 46'13	0°25'18
min. Earth dist.	-4597 Dec 05 j 06:01		17.47383 AU	retrograde	-4590 Oct 24 j 20:17 -4589 Jan 06 j 02:05		0°29'58
direct asc. node	-4596 Feb 18 j 00:42 -4596 Mar 05 j 08:32	6° 8 42'31 6° 8 49'37		opposition min. Earth dist.	-4589 Jan 07 j 04:14		
max. Earth dist.	-4596 Jun 08 j 04:10		10 45210 AII	direct	-4589 Mar 23 j 17:16		17.28907 AU
max. Earm dist.	-4390 Juli 00 J 04.10	11 000 32	19.43310 AU	max. Earth dist.	-4589 Jul 13 j 07:12		10 28/62 ATT
conjunction	-4596 Jun 09 j 11:21	110×11122	0°01'06	max. Earth dist.	-4369 Jul 13 J 07.12	14 112920	19.28402 AU
minimum elong	-4596 Jun 09 j 11:20			conjunction	-4589 Jul 14 j 12:53	14°∏34'01	0°28'39
behind sun begin	-4596 Jun 09 j 04:35		0 01 14	minimum elong	-4589 Jul 14 j 12:53		0°28'52
behind sun end	-4596 Jun 09 j 18:06			retrograde	-4589 Oct 29 j 19:29		0 2032
oomina san ona	-4596 Aug 22 j 05:02			opposition	-4588 Jan 11 j 04:07		0°33'50
retrograde	-4596 Sep 25 j 18:01			min. Earth dist.	-4588 Jan 12 j 06:33		
8	-4596 Oct 30 j 21:48			direct	-4588 Mar 27 j 20:27		-,,,,
opposition	-4596 Dec 08 j 01:03		0°03'28	max. Earth dist.	-4588 Jul 17 j 10:42		19.27969 AU
min. Earth dist.	-4596 Dec 09 j 03:44				,		
direct	-4595 Feb 22 j 01:16			conjunction	-4588 Jul 18 j 15:47	19° Ⅱ 21'48	0°32'01
	-4595 May 30 j 21:27			minimum elong	-4588 Jul 18 j 15:47	19° Ⅱ 21'48	0°32'14
max. Earth dist.	-4595 Jun 13 j 06:20		19.41576 AU	retrograde	-4588 Nov 02 j 20:57	23° II 44'46	
				opposition	-4587 Jan 15 j 06:27	21° Ⅱ 42'49	0°37'28
conjunction	-4595 Jun 14 j 14:37	15° 8 54'39	0°05'16	min. Earth dist.	-4587 Jan 16 j 06:48	21° II 40'11	17.27980 AU
minimum elong	-4595 Jun 14 j 14:37	15° 8 54'39	0°05'26	direct	-4587 Apr 02 j 02:20	19° Ⅱ 36′12	
behind sun begin	-4595 Jun 14 j 08:07	15° 8 53'39					
behind sun end	-4595 Jun 14 j 21:08			conjunction	-4587 Jul 23 j 18:10	24° Ⅱ 09'21	0°35'09
retrograde	-4595 Sep 30 j 16:57	20° 8 16'47		minimum elong	-4587 Jul 23 j 18:10	24° Ⅱ 09'21	0°35'23
opposition	-4595 Dec 12 j 23:35			max. Earth dist.	-4587 Jul 22 j 15:35		19.28053 AU
min. Earth dist.	-4595 Dec 14 j 03:05		17.39925 AU	retrograde	-4587 Nov 07 j 19:46		
direct	-4594 Feb 27 j 01:56			opposition	-4586 Jan 20 j 09:11		0°40'51
max. Earth dist.	-4594 Jun 18 j 10:41	20° 8 34'17	19.38302 AU	min. Earth dist.	-4586 Jan 21 j 09:05		17.28374 AU
				direct	-4586 Apr 07 j 06:32	24° ∏ 23'39	
conjunction	-4594 Jun 19 j 18:20	_				—	
minimum elong	-4594 Jun 19 j 18:20		0°09'33	conjunction	-4586 Jul 28 j 20:01		0°38'03
behind sun begin	-4594 Jun 19 j 12:47			minimum elong	-4586 Jul 28 j 20:01		0°38'16
behind sun end	-4594 Jun 19 j 23:54			max. Earth dist.	-4586 Jul 27 j 18:14		19.28//1 AU
retrograde	-4594 Oct 05 j 17:59		0012140	. 1	-4586 Aug 14 j 15:31	0°©	
opposition	-4594 Dec 17 j 22:41			retrograde	-4586 Nov 12 j 20:15	3°519'05	0942155
min. Earth dist.	-4594 Dec 19 j 01:48		17.30804 AU	opposition	-4585 Jan 25 j 11:47	1°917'12	
direct	-4593 Mar 04 j 04:21	20 033 18		min. Earth dist.	-4585 Jan 26 j 09:17 -4585 Feb 26 j 14:23		17.29419 AU
conjunction	-4593 Jun 24 j 22:13	25022151	0°13'27	direct	-4585 Apr 12 j 12:26		
minimum elong	-4593 Jun 24 j 22:13			uncet	-4585 May 26 j 04:54	29 ப 10 44	
behind sun begin	-4593 Jun 24 j 18:38		0 13 30		7303 May 20 J 04.34	0 3	
behind sun end	-4593 Jun 25 j 01:47			conjunction	-4585 Aug 02 j 21:31	3°543'12	0°40'40
max. Earth dist.	-4593 Jun 23 j 13:56		19 35448 ATT	minimum elong	-4585 Aug 02 j 21:31	3°943'12	0°40'54
retrograde	-4593 Oct 10 j 17:13		17.55 170 110	max. Earth dist.	-4585 Aug 02 j 21:31 -4585 Aug 01 j 22:49		19.30144 AU
opposition	-4593 Dec 22 j 22:44		0°17'11	retrograde	-4585 Nov 17 j 19:13	8°905'27	-,
min. Earth dist.	-4593 Dec 24 j 02:45			opposition	-4584 Jan 30 j 14:52	6°903'40	0°46'42
direct	-4592 Mar 08 j 05:49			min. Earth dist.	-4584 Jan 31 j 11:13		17.31118 AU
	-4592 Jun 26 j 01:20	0°II		direct	-4584 Apr 16 j 17:03	3°957'23	,
	<i>y</i>				, J		

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4584 in astronomical counting style is the year 4585 BCE in historical counting style. -4584 Aug 06 i 22:09 8°9529'18 0°43'01 direct -4576 May 25 j 19:22 $11^{\circ}\Omega$ 38'47 conjunction -4584 Aug 06 j 22:09 8°9529'18 0°43'14 -4576 Aug 27 j 12:04 15°**Ω** minimum elong -4584 Aug 06 j 00:32 max. Earth dist. 8°525'52 19.32183 AU -4584 Nov 21 j 19:14 12°551'13 -4576 Sep 13 j 03:07 $16^{\circ}\Omega$ 01'57 0° 50'15 retrograde conjunction -4576 Sep 13 j 03:07 $16^{\circ}\Omega$ 01'57 0° 50'25 -4583 Feb 03 j 17:55 10°549'32 0°49'09 opposition minimum elong -4576 Sep 13 j 00:00 16°**Ω**01'28 19.66395 AU min. Earth dist. -4583 Feb 04 j 11:44 10°547'38 17.33482 AU max. Earth dist. -4576 Dec 29 j 06:13 20°**Ω**19'06 direct -4583 Apr 21 j 21:56 8°9543'29 retrograde -4575 Mar 14 j 13:37 18° **Ω**18'20 0°55'40 opposition conjunction -4583 Aug 11 j 22:25 13°514'44 0°45'03 min. Earth dist. -4575 Mar 14 j 15:34 18° Ω18'07 17.69238 AU minimum elong -4583 Aug 11 j 22:25 13°5014'44 0°45'17 direct -4575 May 30 j 20:06 $16^{\circ}\Omega$ 14'53 max. Earth dist. -4583 Aug 11 j 04:11 13°5511'51 19.34863 AU -4583 Nov 26 j 18:32 17°536'14 -4575 Sep 17 j 20:58 20° **Ω**36'31 0°49'40 retrograde conjunction -4575 Sep 17 j 20:58 20°**Ω**36'31 opposition -4582 Feb 08 j 20:58 15°534'43 0°51'15 minimum elong 0°49'50 min. Earth dist. -4582 Feb 09 j 13:11 15°532'59 17.36453 AU max. Earth dist. -4575 Sep 17 j 20:12 20°**Ω**36'24 19.72125 AU direct -4582 Apr 27 j 01:37 13°528'57 retrograde -4574 Jan 03 j 02:13 24°**Q**52'50 opposition -4574 Mar 19 j 13:58 22°**Ω**52'06 0°54'50 conjunction -4582 Aug 16 j 21:51 17°559'24 0°46'47 min. Earth dist. -4574 Mar 19 j 12:44 22°**Ω**52'14 17.75076 AU minimum elong -4582 Aug 16 j 21:51 17°559'24 0°47'02 direct -4574 Jun 04 j 21:34 20°**Ω**48'58 max. Earth dist. -4582 Aug 16 j 04:49 17°556'42 retrograde -4582 Dec 01 j 18:35 22°520'28 conjunction -4574 Sep 22 j 13:51 25° Ω 09'02 0°48'47 opposition -4581 Feb 14 j 00:00 20°519'05 0°53'00 minimum elong -4574 Sep 22 j 13:51 25° Ω 09'02 0°48'55 min. Earth dist. -4581 Feb 14 i 14:04 20°\$17'35 17.39984 AU max. Earth dist. -4574 Sep 22 j 15:41 25° **Ω**09'19 19.78084 AU -4573 Jan 07 j 19:57 29°**Ω**24'31 direct -4581 May 02 j 05:03 18°513'37 retrograde opposition -4573 Mar 24 j 13:58 $27^{\circ}\Omega$ 23'49 0° 53'39 conjunction -4581 Aug 21 i 20:44 22°5643'09 0°48'12 min. Earth dist. -4573 Mar 24 j 11:23 $27^{\circ}\Omega$ 24'05 17.81166 AU -4581 Aug 21 j 20:44 22°543'09 0°48'25 -4573 Jun 09 j 20:16 25°**Ω**21'01 minimum elong direct -4581 Aug 21 j 06:56 22°540'58 19.41906 AU max Earth dist -4581 Dec 06 j 17:54 27°503'41 -4573 Sep 27 j 05:38 29°**Ω**39'27 0°47'36 retrograde conjunction -4580 Feb 19 j 03:00 25°502'28 0°54'23 -4573 Sep 27 j 05:38 29° Ω 39'27 0°47'44 opposition minimum elong -4580 Feb 19 j 15:01 25°501'12 17.43984 AU max. Earth dist. -4573 Sep 27 j 09:43 29° Ω40'05 19.84306 AU min. Earth dist. -4580 May 06 j 08:16 22°557'21 -4573 Oct 02 j 18:12 0° Mg direct -4572 Jan 12 j 14:53 3° Mp 54'06 retrograde -4580 Aug 25 j 18:50 27°\$25'50 0°49'17 conjunction -4572 Mar 28 j 13:08 1° m 53'26 0°52'10 opposition -4580 Aug 25 j 18:50 27°\$25'50 0°49'30 min. Earth dist. -4572 Mar 28 j 06:58 1° Mp 54'04 17.87513 AU minimum elong -4580 Aug 25 j 06:26 27°523'52 19.46131 AU -4572 May 25 j 22:07 30°RΩ max. Earth dist. -4580 Oct 08 j 02:58 0°**Ω** -4572 Jun 13 j 19:53 29° **Ω**51'00 direct -4580 Dec 10 j 17:22 $1^{\circ}\Omega$ 45'48 -4572 Jul 02 j 08:47 retrograde 0° m -4579 Feb 17 j 04:43 30°Rூ opposition -4579 Feb 23 j 05:53 29°544'42 0°55'23 conjunction -4572 Sep 30 j 20:40 4° m 07'48 0°46'09 min. Earth dist. -4579 Feb 23 j 16:04 29°543'37 17.48420 AU minimum elong -4572 Sep 30 j 20:40 4° m 07'48 0°46'16 direct -4579 May 11 j 11:03 27°539'54 max. Earth dist. -4572 Oct 01 j 03:47 4° Mp 08'54 19.90781 AU -4579 Jul 26 j 15:56 retrograde -4571 Jan 16 j 07:09 8°m/21'38 -4571 Apr 02 j 11:40 6° Mg 21'02 $0^{\circ}50'22$ opposition -4579 Aug 30 j 16:08 2°**Ω**07'13 0°50'02 min. Earth dist. -4571 Apr 02 j 04:02 6° Mp 21'49 17.94123 AU conjunction -4579 Aug 30 j 16:08 2°Ω07'13 0°50'14 direct -4571 Jun 18 j 16:11 4° m 19'00 minimum elong -4579 Aug 30 i 06:40 max. Earth dist. 2°**Ω**05'43 19.50752 AU -4579 Dec 15 i 15:47 -4571 Oct 05 i 10:42 retrograde 6°Ω26'33 conjunction 8° m 34'10 0°44'25 4°Ω25'35 0°56'01 -4571 Oct 05 i 10:42 opposition -4578 Feb 28 i 08:24 minimum elong 8° m 34'10 0°44'31 min. Earth dist. -4578 Feb 28 i 16:05 4°Ω24'46 17.53199 AU max. Earth dist. -4571 Oct 05 i 19:44 8° m 35'33 19.97518 AU direct -4578 May 16 j 14:21 2°Ω21'08 retrograde -4570 Jan 21 i 01:14 12° mb 47'11 opposition -4570 Apr 07 j 09:15 10° mp 46'41 0° 48'18 -4578 Sep 04 j 12:40 6°Ω47'09 0°50'26 min. Earth dist. -4570 Apr 06 j 22:10 10° Mp 47'50 18.00962 AU conjunction -4578 Sep 04 j 12:40 6°Ω47'09 0°50'37 direct -4570 Jun 23 j 13:15 minimum elong 8° Mp 45'05 max. Earth dist. -4578 Sep 04 j 04:50 6°**Ω**45'55 19.55689 AU retrograde -4578 Dec 20 j 13:26 $11^{\circ}\Omega$ 05'48 conjunction -4570 Oct 10 j 00:01 12° m 58'38 0°42'27 9°**Ω**04'55 0°56'16 opposition -4577 Mar 05 j 10:32 minimum elong -4570 Oct 10 j 00:01 12° m 58'38 0°42'32 min. Earth dist. -4577 Mar 05 j 16:46 9°**Ω**04'16 17.58288 AU max. Earth dist. -4570 Oct 10 j 12:09 13° m 00'30 20.04445 AU -4577 May 21 j 16:18 7°**Ω**00'48 -4569 Jan 25 j 16:15 17° Mp 10'51 direct retrograde -4569 Apr 12 j 06:14 15° Mp 10'30 0°45'57 opposition -4577 Sep 09 j 08:26 $11^{\circ}\Omega$ 25'27 0°50'31 -4569 Apr 11 j 17:51 15° Mp 11'46 18.07971 AU conjunction min. Earth dist. -4577 Sep 09 j 08:26 $11^{\circ}\Omega$ 25'27 0° 50'42 -4569 Jun 28 j 07:34 13° Mp 09'21 minimum elong direct max. Earth dist. -4577 Sep $09 \text{ j } 03:09 \text{ } 11^{\circ}\Omega 24'38 \text{ } 19.60921 \text{ AU}$ -4577 Nov 15 j 06:40 15° Ω conjunction -4569 Oct 14 j 12:29 17° m 21'19 0°40'15 retrograde -4577 Dec 25 j 10:40 15°**Ω**43'21 minimum elong -4569 Oct 14 j 12:29 17° m 21'19 0°40'18 -4576 Feb 05 j 02:04 15°RΩ max. Earth dist. -4569 Oct 15 j 02:10 17° m 23'24 20.11528 AU -4576 Mar 09 j 12:16 13° **Ω**42'33 0°56'09 -4568 Jan 30 j 09:26 21° Mp 32'45 opposition retrograde

min. Earth dist.

-4568 Apr 15 j 10:57 19° My 34'07 18.15098 AU

min. Earth dist.

-4576 Mar 09 j 15:35 13° **Ω**42'12 17.63636 AU

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4568 in astronomical counting style is the year 4569 BCE in historical counting style. -4568 Apr 16 j 02:27 19° m 32'32 0°43'22 retrograde -4560 Mar 04 j 21:15 25° \alpha 26'53 opposition opposition direct -4568 Jul 02 j 02:10 17° m 31'51 -4560 May 21 j 16:32 23°**2**27'16 0°16'06 min. Earth dist. -4560 May 20 j 14:20 23° **2**29'54 18.67527 AU -4568 Oct 18 j 00:15 21° mp 42'14 0°37'50 -4560 Aug 05 j 23:53 21°**2**29'29 conjunction direct -4568 Oct 18 j 00:15 21° mp 42'15 0°37'53 minimum elong -4568 Oct 18 j 16:58 21° Mp 44'47 20.18674 AU -4560 Nov 20 j 00:15 25°**2**28'29 0°12'52 max. Earth dist. conjunction -4560 Nov 20 j 00:15 25°**£**28'29 retrograde -4567 Feb 02 j 23:57 25° m 52'55 minimum elong 0°12'46 -4567 Apr 20 j 22:03 23° m 52'51 -4560 Nov 19 j 20:04 25°**2**27'53 opposition 0°40'32 behind sun begin min. Earth dist. -4567 Apr 20 j 05:30 23° M 54'32 18.22250 AU behind sun end -4560 Nov 20 j 04:26 25°**£**29'05 direct -4567 Jul 06 j 19:04 21° m 52'38 max. Earth dist. -4560 Nov 21 j 04:08 25°**Ω**32'35 20.70247 AU retrograde -4559 Mar 09 j 06:27 29°**♀**33'31 -4567 Oct 22 j 11:21 26° m 01'28 0°35'12 conjunction min. Earth dist. -4559 May 25 j 02:35 27°**2**36'36 18.72954 AU -4567 Oct 22 j 11:21 26° m 01'28 0°35'14 minimum elong opposition -4559 May 26 j 05:37 27°**♀**33'53 0°12'13 max. Earth dist. -4567 Oct 23 j 05:03 26° m 04'09 20.25816 AU direct -4559 Aug 10 j 11:44 25°**♀**36'21 -4566 Jan 17 j 14:33 0∘**⊽** retrograde -4566 Feb 07 j 15:51 0°**£**11'24 conjunction -4559 Nov 24 j 06:43 29°**£**34'10 0°09'21 -4566 Mar 01 j 01:58 30°R M minimum elong -4559 Nov 24 j 06:43 29°**♀**34'10 0°09'15 opposition -4566 Apr 25 j 16:35 28° Mp 11'28 0°37'30 behind sun begin -4559 Nov 24 j 01:10 29°**♀**33'23 min. Earth dist. -4566 Apr 24 j 21:31 28° m 13'24 18.29360 AU behind sun end -4559 Nov 24 j 12:16 29°**£**34'58 direct -4566 Jul 11 j 11:21 26° Mp 11'42 max. Earth dist. -4559 Nov 25 j 10:33 29°**2**38'15 20.75557 AU -4566 Oct 21 j 15:44 -4559 Dec 01 j 14:59 0°M retrograde -4558 Mar 13 i 17:21 3°M38'37 conjunction -4566 Oct 26 j 21:55 0°**2**19'02 0°32'24 opposition -4558 May 30 j 17:51 1°M39'00 0°08'18 minimum elong -4566 Oct 26 j 21:55 0°**2**19'02 0°32'24 min. Earth dist. -4558 May 29 j 13:51 1°ML41'48 18.78159 AU max. Earth dist. -4566 Oct 27 j 18:17 0°**2**22'06 20.32862 AU -4558 Jul 18 j 14:25 30°R ₽ retrograde -4565 Feb 12 j 05:31 4°**£**28'12 -4558 Aug 14 j 21:21 29°**£**41'41 direct -4565 Apr 30 j 10:39 2°**2**28'24 0°34'17 -4558 Sep 10 j 13:49 opposition oom. min. Earth dist. -4565 Apr 29 j 14:44 2°**≏**30'25 18.36336 AU -4565 Jul 16 j 03:31 0°**£**29'04 -4558 Nov 28 j 12:56 3°**M**₊38'27 direct conjunction 0°05'50 3°M38'27 -4558 Nov 28 j 12:56 minimum elong 0°05'43 -4565 Oct 31 j 07:39 4°**2**34'54 0°29'26 -4558 Nov 28 j 06:39 conjunction behind sun begin 3°M37'33 -4565 Oct 31 j 07:39 -4558 Nov 28 j 19:13 minimum elong 4°**2**34'54 0°29'26 behind sun end 3°M39'20 4°**△**38'02 20.39751 AU -4558 Nov 29 j 18:52 -4565 Nov 01 j 04:33 max. Earth dist. max. Earth dist. 3°M42'49 20.80639 AU -4564 Feb 16 j 20:29 8°**≗**43'22 -4557 Mar 18 j 01:56 7°M42'22 retrograde retrograde 6°**£**45'52 18.43126 AU -4564 May 03 j 05:56 -4557 Jun 03 j 00:36 5°M45'40 18.83122 AU min. Earth dist. min. Earth dist. -4564 May 04 j 03:54 -4557 Jun 04 j 05:28 5°M42'46 0°04'22 opposition 6°**£**43'39 0°30'53 opposition -4564 Jul 19 j 18:05 -4557 Aug 19 j 07:10 direct 4°**£**44'42 direct 3°M45'42 conjunction -4564 Nov 03 j 17:03 8°**△**49'05 0°26'19 conjunction -4557 Dec 02 j 18:33 7°M41'28 0°02'16 minimum elong -4564 Nov 03 j 17:03 8°**♀**49'05 0°26'17 minimum elong -4557 Dec 02 j 18:34 7°**IL**41'28 0°02'08 max. Earth dist. -4564 Nov 04 j 16:18 8°**♀**52'33 20.46410 AU behind sun begin -4557 Dec 02 j 12:01 7°M40'32 retrograde -4563 Feb 20 j 08:44 12°**2**56'48 behind sun end -4557 Dec 03 j 01:06 7°M42'23 -4563 May 08 j 20:16 10° **2**57'10 0°27'21 max. Earth dist. -4557 Dec 04 j 00:18 7°M45'48 20.85483 AU opposition min. Earth dist. -4563 May 07 j 21:36 10°**2**59'28 18.49653 AU retrograde -4556 Mar 21 j 11:53 11°M 44'56 direct -4563 Jul 24 j 09:18 min. Earth dist. -4556 Jun 06 j 11:05 9°ML48'19 18.87844 AU 8°**£**58'35 9°M45'23 0°00'26 opposition -4556 Jun 07 i 16:31 -4563 Nov 08 j 01:43 13°**£**01'32 0°23'05 conjunction desc. node -4556 Jul 17 i 13:25 8°M19'51 -4563 Nov 08 j 01:43 13°**£**01'32 0°23'03 minimum elong direct -4556 Aug 22 j 15:11 7°**IL**48'33 max. Earth dist. -4563 Nov 09 i 01:03 13°**2**05'01 20.52800 AU conjunction retrograde -4562 Feb 24 i 22:22 17° **2**08'34 -4556 Dec 06 j 00:16 11° ML 43'26 0°-1'-23 minimum elong min. Earth dist. -4562 May 12 j 11:38 15° **2** 11'23 18.55900 AU -4556 Dec 06 j 00:15 11°ML43'26 0°01'31 -4562 May 13 j 11:50 15°**2**08'57 0°23'41 behind sun begin -4556 Dec 05 j 17:42 11°M42'31 opposition -4556 Dec 06 j 06:49 11°M.44'22 direct -4562 Jul 28 j 22:30 13°**£**10'40 behind sun end max. Earth dist. -4556 Dec 07 j 07:47 11°ML48'01 20.90056 AU conjunction -4562 Nov 12 j 09:48 17°**2**12'15 0°19'45 -4555 Feb 09 j 17:42 15°M minimum elong -4562 Nov 12 j 09:48 17°**2**12'15 0°19'41 retrograde -4555 Mar 25 j 20:39 15° M 46'29 -4555 May 10 j 09:10 15°**R** ጤ max. Earth dist. -4562 Nov 13 j 11:20 17°**2**16'02 20.58888 AU retrograde -4561 Mar 01 j 08:59 21° **2**18'34 min. Earth dist. -4555 Jun 10 j 20:43 13°M 50'00 18.92261 AU -4561 May 17 j 01:39 19°**2**21'29 18.61841 AU opposition -4555 Jun 12 j 02:41 13°M 47'00 0°-3'-29 min. Earth dist. -4561 May 18 j 02:35 19°**2**18'59 direct -4555 Aug 26 j 23:32 11°M 50'25 opposition 0°19'56 -4561 Aug 02 j 12:21 17°**£**20'58 -4555 Nov 27 j 08:36 15°M direct conjunction -4561 Nov 16 j 17:14 21°**2**21'13 0°16'20 conjunction -4555 Dec 10 j 05:36 15°M44'31 0°-4'-56 minimum elong -4561 Nov 16 j 17:14 21°**2**21'13 0°16'16 minimum elong -4555 Dec 10 j 05:35 15°M 44'31 0°05'06 behind sun begin -4561 Nov 16 j 17:09 21°**£**21'12 behind sun begin -4555 Dec 09 j 23:13 15°ML43'37 behind sun end -4561 Nov 16 j 17:19 21°**2**21'14 behind sun end -4555 Dec 10 j 11:58 15°M45'25

max. Earth dist.

-4555 Dec 11 j 12:27 15°ML48'59 20.94312 AU

max. Earth dist.

-4561 Nov 17 j 18:52 21°**2**25'00 20.64698 AU

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4554 in astronomical counting style is the year 4555 BCE in historical counting style. -4554 Mar 30 i 05:37 19° ML47'13 min. Earth dist. -4547 Jul 13 i 17:34 15° ₹ 41'31 19.11270 AU retrograde min. Earth dist. -4554 Jun 15 j 06:33 17°ML50'48 18.96348 AU direct -4547 Sep 27 j 23:36 13° ₹ 43'03 -4554 Jun 16 j 12:30 17°ML47'49 0°-7'-23 opposition direct -4554 Aug 31 j 06:08 15°ML51'27 -4546 Jan 11 j 00:53 17° **₹** 34'01 0°-30'-42 conjunction -4546 Jan 11 j 00:52 17° ₹34'01 minimum elong 0°30'56 -4554 Dec 14 j 10:51 19°M44'51 0°-8'-25 -4546 Jan 12 j 04:06 17° ₹37'53 21.11299 AU conjunction max. Earth dist. -4554 Dec 14 j 10:50 19°M.44'51 -4546 May 01 j 22:07 21°**尽** 35'34 minimum elong 0°08'36 retrograde -4554 Dec 14 j 05:06 19°M.44'03 -4546 Jul 18 j 01:26 19° ₹ 38'36 19.11303 AU behind sun begin min. Earth dist. -4546 Jul 19 j 02:16 19°**х** 36'07 behind sun end -4554 Dec 14 j 16:35 19°M 45'40 opposition 0°-35'-28 -4546 Oct 02 j 03:00 17° ₹ 40'12 max. Earth dist. -4554 Dec 15 j 19:08 19°ML49'31 20.98201 AU direct retrograde -4553 Apr 03 j 14:31 23°ML47'17 -4553 Jun 20 j 21:46 21°M 47'57 -4545 Jan 15 j 06:39 21° ₹31'10 0°-33'-23 opposition 0°-11'-14 conjunction -4553 Jun 19 j 15:32 21°ML50'58 19.00029 AU -4545 Jan 15 j 06:39 21° **₹** 31'10 0°33'37 min. Earth dist. minimum elong -4545 Jan 16 j 10:13 21° ₹ 35'05 21.11107 AU direct -4553 Sep 04 j 13:43 19°M51'48 max. Earth dist. retrograde -4545 May 06 j 05:55 25° **₹** 32'46 conjunction -4553 Dec 18 j 16:03 23°M44'36 0°-11'-52 min. Earth dist. -4545 Jul 22 j 07:45 23°**х** 35'42 19.10895 AU minimum elong -4553 Dec 18 j 16:03 23°M.44'36 0°12'03 opposition -4545 Jul 23 j 08:18 23°**尽** 33'14 0°-38'-20 behind sun begin -4553 Dec 18 j 11:32 23°ML43'58 direct -4545 Oct 06 j 08:40 21° ₹37'13 behind sun end -4553 Dec 18 j 20:35 23°M 45'14 max. Earth dist. -4553 Dec 19 j 23:14 23°ML49'05 21.01668 AU conjunction -4544 Jan 19 j 12:39 25° **₹** 28'18 0°-35'-55 retrograde -4552 Apr 06 j 22:54 27° 11.46'48 minimum elong -4544 Jan 19 j 12:39 25° ₹28'18 0°36'09 min. Earth dist. -4552 Jun 23 i 00:59 25°M 50'29 19.03274 AU max. Earth dist. -4544 Jan 20 j 14:11 25° ₹31'55 21.10500 AU opposition -4552 Jun 24 i 06:34 25° ML47'31 0°-15'-1 retrograde -4544 May 09 i 13:28 29° ₹30'01 direct -4552 Sep 07 j 19:21 23°M51'33 opposition -4544 Jul 26 i 14:06 27° ₹ 30'24 0°-41'-3 min. Earth dist. -4544 Jul 25 j 15:14 27° ₹32'43 19.10096 AU -4552 Dec 21 j 21:29 27° ML43'51 0°-15'-15 direct -4544 Oct 09 j 11:19 25° ₹34'17 conjunction -4552 Dec 21 j 21:29 27°ML43'51 0°15'27 minimum elong -4552 Dec 21 j 19:32 27°ML43'35 -4543 Jan 22 j 19:10 29° ₹25'34 0°-38'-16 behind sun begin conjunction -4552 Dec 21 j 23:26 27° ML44'07 -4543 Jan 22 j 19:10 29°**₹** 25'34 0°38'30 behind sun end minimum elong max. Earth dist. -4552 Dec 23 j 05:28 27°ML48'26 21.04655 AU max. Earth dist. -4543 Jan 23 j 20:45 29° ₹29'12 21.09502 AU -4551 Feb 01 j 20:03 0° ₹ -4543 Feb 01 j 22:13 0°る -4551 Apr 11 j 07:28 1°**∡**¹45'50 3°**る**27'28 -4543 May 13 j 21:50 retrograde retrograde -4551 Jun 23 j 00:46 30°RM -4543 Jul 30 j 19:43 1°る27'47 0°-43'-33 opposition -4551 Jun 27 j 09:23 29°M 49'34 19.05993 AU -4543 Jul 29 j 21:17 min. Earth dist. 1°る30'03 19.08896 AU min. Earth dist. -4551 Jun 28 j 14:51 29°M 46'37 0°-18'-44 -4543 Sep 09 j 17:11 30°R ✓ opposition -4551 Sep 12 j 02:08 27° \$\mathbb{n}\$ 50'47 -4543 Oct 13 j 16:40 29° ₹31'34 direct direct -4551 Nov 25 j 06:30 -4543 Nov 16 j 00:17 0°× 0°궁 conjunction -4551 Dec 26 j 02:47 1°**∡**142'39 0°-18'-34 conjunction -4542 Jan 27 j 01:44 3°る23'09 0°-40'-27 minimum elong -4551 Dec 26 j 02:47 1°**∡**¹42'39 0°18'46 minimum elong -4542 Jan 27 j 01:44 3°る23'09 0°40'42 max. Earth dist. -4551 Dec 27 j 09:04 1°**尽**47'00 21.07099 AU max. Earth dist. -4542 Jan 28 j 01:03 3°る26'27 21.08111 AU retrograde -4550 Apr 15 j 15:30 5°**∡**¹44'29 retrograde -4542 May 18 j 05:57 7°る25'18 -4550 Jul 02 j 22:47 3°**∡**¹45'17 0°-22'-20 min. Earth dist. -4542 Aug 03 j 04:49 5°る27'40 19.07316 AU opposition min. Earth dist. -4550 Jul 01 j 18:25 3°**₹**¹48'07 19.08161 AU -4542 Aug 04 j 01:23 opposition direct -4550 Sep 16 j 07:16 1°**√**49'31 direct -4542 Oct 17 j 19:46 3°**ට**29'14 -4550 Dec 30 j 08:18 5°×41'03 0°-21'-47 -4541 Jan 31 i 09:01 7°る21'14 0°-42'-27 conjunction conjunction -4550 Dec 30 j 08:18 -4541 Jan 31 i 09:01 minimum elong 5°**∡**141'03 0°22'00 minimum elong 7°る21'14 0°42'41 5°**∡**'45'27 21.08976 AU max. Earth dist. -4550 Dec 31 i 15:00 max. Earth dist. -4541 Feb 01 i 08:09 7°る24'31 21.06338 AU retrograde -4549 Apr 19 i 23:25 9°×742'45 retrograde -4541 May 22 i 14:52 11° ₹23'41 min. Earth dist. -4549 Jul 06 i 02:09 7°**∡**146'20 19.09744 AU min. Earth dist. -4541 Aug 07 j 10:57 9°る25'57 19.05337 AU -4549 Jul 07 j 06:15 7°**҂**¹43'32 0°-25'-50 -4541 Aug 08 j 06:55 9°**ප්**23'56 0°-47'-58 opposition opposition direct -4549 Sep 20 j 13:20 5°**∡**'47'48 direct -4541 Oct 22 j 00:35 7°る27'28 -4540 Feb 04 j 16:40 11°중19'59 0°-44'-15 9°**х** 39'03 0°-24'-53 conjunction -4548 Jan 03 j 13:38 conjunction -4540 Feb 04 j 16:39 11°る19'59 0°44'30 minimum elong -4548 Jan 03 j 13:38 9° 🗷 39'03 0°25'06 minimum elong max. Earth dist. -4548 Jan 04 j 18:28 9°**尽**43'10 21.10282 AU max. Earth dist. -4540 Feb 05 j 13:10 11°₹22'54 21.04162 AU retrograde -4548 Apr 23 j 07:15 13°**х** 40'40 retrograde -4540 May 26 j 00:00 15°る22'49 -4548 Jul 09 j 10:44 11° ₹ 44'03 19.10774 AU -4540 Aug 11 j 12:39 13°る23'01 0°-49'-51 min. Earth dist. opposition -4548 Jul 10 j 13:26 11°**х** 41'22 0°-29'-12 min. Earth dist. -4540 Aug 10 j 18:58 13°**궁**24'49 19.02947 AU opposition -4548 Sep 23 j 17:55 direct -4540 Oct 25 j 04:26 11°**3**26'24 direct 9°**∡¹**45'37 -4539 Feb 08 j 01:08 15°る19'33 0°-45'-51 conjunction -4547 Jan 06 j 19:20 13° ₹ 36'41 0°-27'-52 conjunction minimum elong -4547 Jan 06 j 19:20 13° ₹ 36'41 0°28'06 minimum elong -4539 Feb 08 j 01:08 15°**る**19'33 0°46'05 max. Earth dist. -4547 Jan 08 j 00:28 13°**х** 40'50 21.11041 AU max. Earth dist. -4539 Feb 08 j 20:59 15°る22'22 21.01549 AU -4547 Apr 27 j 14:40 17° ₹38'14 -4539 May 30 j 09:23 19°る22'46 retrograde retrograde -4547 Jul 14 j 19:53 15° ₹ 38'52 0°-32'-24 -4539 Aug 15 j 18:12 17°る22'57 0°-51'-30 opposition opposition

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	ical year style is used: Th						
min. Earth dist.	-4539 Aug 15 j 01:30		19.00096 AU	max. Earth dist.	-4531 Mar 13 j 21:18		20.64041 AU
direct	-4539 Oct 29 j 09:26	15° 6 26'11		retrograde	-4531 Jul 02 j 23:19		00 551 5
				opposition	-4531 Sep 16 j 23:40		0°-55'-5
conjunction	-4538 Feb 12 j 10:02			min. Earth dist.	-4531 Sep 16 j 22:32		18.60989 AU
minimum elong	-4538 Feb 12 j 10:02			direct	-4531 Nov 30 j 14:00	18° ≈ 00'21	
max. Earth dist.	-4538 Feb 13 j 02:49		20.98465 AU				
retrograde	-4538 Jun 03 j 18:57			conjunction	-4530 Mar 18 j 09:28		0°-49'-23
min. Earth dist.	-4538 Aug 19 j 10:08			minimum elong	-4530 Mar 18 j 09:28		0°49'33
opposition	-4538 Aug 20 j 00:13		0°-52'-53	max. Earth dist.	-4530 Mar 18 j 08:32		20.57888 AU
direct	-4538 Nov 02 j 13:52	19° ර 26'52		retrograde	-4530 Jul 07 j 10:23		
				opposition	-4530 Sep 21 j 07:54		0°-54'-15
conjunction	-4537 Feb 16 j 19:39			min. Earth dist.	-4530 Sep 21 j 09:28		18.54771 AU
minimum elong	-4537 Feb 16 j 19:39			direct	-4530 Dec 04 j 21:21	22° ≈ 10′13	
max. Earth dist.	-4537 Feb 17 j 11:25		20.94886 AU				
retrograde	-4537 Jun 08 j 05:20			conjunction	-4529 Mar 23 j 00:37		0°-48'-30
opposition	-4537 Aug 24 j 06:18			minimum elong	-4529 Mar 23 j 00:37		0°48'38
min. Earth dist.	-4537 Aug 23 j 17:23		18.92923 AU	max. Earth dist.	-4529 Mar 22 j 22:22		20.51613 AU
direct	-4537 Nov 06 j 20:02	23° ℃ 28'30		_	-4529 Jun 11 j 19:03	0° \	
		_		retrograde	-4529 Jul 12 j 00:29	0°) 23′00	
conjunction	-4536 Feb 21 j 05:56		0°-49'-16		-4529 Aug 11 j 08:56		
minimum elong	-4536 Feb 21 j 05:56		0°49'29	opposition	-4529 Sep 25 j 16:30		
max. Earth dist.	-4536 Feb 21 j 18:17		20.90786 AU	min. Earth dist.	-4529 Sep 25 j 18:53		18.48432 AU
	-4536 Apr 10 j 13:28	0° ≈		direct	-4529 Dec 09 j 07:56		
retrograde	-4536 Jun 11 j 14:47	1° ≈ 28'41			-4528 Mar 19 j 00:53	0° ∀	
	-4536 Aug 14 j 16:03	30°₹⋜					
opposition	-4536 Aug 27 j 12:36	29° ප් 28'36		conjunction	-4528 Mar 26 j 16:39		0°-47'-20
min. Earth dist.	-4536 Aug 27 j 02:37		18.88570 AU	minimum elong	-4528 Mar 26 j 16:39	0°) 26'42	0°47'29
direct	-4536 Nov 10 j 00:59	27° る 31'04		max. Earth dist.	-4528 Mar 26 j 11:25		20.45223 AU
	-4535 Jan 29 j 15:03	0° ≈		retrograde	-4528 Jul 15 j 12:53	4°) 36′47	
				opposition	-4528 Sep 29 j 01:46	2° ∺ 35'35	
conjunction	-4535 Feb 24 j 17:02	1° ≈ 27'29	0°-49'-56	min. Earth dist.	-4528 Sep 29 j 06:57		18.42002 AU
minimum elong	-4535 Feb 24 j 17:02	1° ≈ 27'29	0°50'09	direct	-4528 Dec 12 j 16:59	0° ∺ 35′06	
max. Earth dist.	-4535 Feb 25 j 04:04		20.86193 AU				
retrograde	-4535 Jun 16 j 02:19	5° ≈ 32'43		conjunction	-4527 Mar 31 j 09:38	4°) 41'33	0°-45'-55
opposition	-4535 Aug 31 j 19:03		0°-55'-30	minimum elong	-4527 Mar 31 j 09:38	4°) 41'33	0°46'02
min. Earth dist.	-4535 Aug 31 j 10:16		18.83735 AU	max. Earth dist.	-4527 Mar 31 j 02:52		20.38759 AU
direct	-4535 Nov 14 j 08:21	1° ≈ 34'39		retrograde	-4527 Jul 20 j 04:13	8° ¥ 52'28	
				opposition	-4527 Oct 03 j 11:36	6° ¥ 51'13	0°-50'-1
conjunction	-4534 Mar 01 j 04:22	5° ≈ 32'03	0°-50'-20	min. Earth dist.	-4527 Oct 03 j 17:39		18.35490 AU
minimum elong	-4534 Mar 01 j 04:22	5° ≈ 32'03	0°50'32	direct	-4527 Dec 17 j 04:38	4° ¥ 50′23	
max. Earth dist.	-4534 Mar 01 j 12:07		20.81148 AU				
retrograde	-4534 Jun 20 j 11:43	9° ≈ 37'53		conjunction	-4526 Apr 05 j 03:17	8° ¥ 58′23	0°-44'-14
opposition	-4534 Sep 05 j 01:53	7° ≈ 37'29	0°-55'-50	minimum elong	-4526 Apr 05 j 03:17	8° ¥ 58'23	0°44'21
min. Earth dist.	-4534 Sep 04 j 19:57		18.78494 AU	max. Earth dist.	-4526 Apr 04 j 17:44		20.32201 AU
direct	-4534 Nov 18 j 13:47	5° ≈ 39'16		retrograde	-4526 Jul 24 j 18:17		
				opposition	-4526 Oct 07 j 22:17		0°-48'-1
conjunction	-4533 Mar 05 j 16:40	9° ≈ 37'44	0°-50'-29	min. Earth dist.	-4526 Oct 08 j 07:17		18.28890 AU
minimum elong	-4533 Mar 05 j 16:40	9° ≈ 37'44	0°50'42	direct	-4526 Dec 21 j 15:36	9°) 07'40	
max. Earth dist.	-4533 Mar 05 j 23:14	9° ≈ 38'40	20.75733 AU				
retrograde	-4533 Jun 25 j 00:12	13° ≈ 44′10		conjunction	-4525 Apr 09 j 22:08		
opposition	-4533 Sep 09 j 08:44	11° ≈ 43'37		minimum elong	-4525 Apr 09 j 22:08		0°42'23
min. Earth dist.	-4533 Sep 09 j 03:53		18.72911 AU	max. Earth dist.	-4525 Apr 09 j 10:37		20.25555 AU
direct	-4533 Nov 22 j 22:12	9° ≈ 45'00		retrograde	-4525 Jul 29 j 11:04		
				opposition	-4525 Oct 12 j 09:25		0°-45'-44
conjunction	-4532 Mar 09 j 05:31	13° ≈ 44'37		min. Earth dist.	-4525 Oct 12 j 19:32		18.22183 AU
minimum elong	-4532 Mar 09 j 05:31	13° ≈ 44'37	0°50'34	direct	-4525 Dec 26 j 05:03	13° ★ 26'57	
max. Earth dist.	-4532 Mar 09 j 08:52		20.70007 AU				
_	-4532 Mar 31 j 09:44	15° ≈		conjunction	-4524 Apr 13 j 17:56		0°-40'-5
retrograde	-4532 Jun 28 j 10:14	17°≈51'42	00 551 5-	minimum elong	-4524 Apr 13 j 17:57		0°40'09
opposition	-4532 Sep 12 j 16:07	15°≈50'59	0°-55'-37	max. Earth dist.	-4524 Apr 13 j 03:35		20.18780 AU
min. Earth dist.	-4532 Sep 12 j 14:06		18.67059 AU	retrograde	-4524 Aug 02 j 02:32		
	-4532 Oct 03 j 15:54			opposition	-4524 Oct 15 j 21:38		0°-43'-10
direct	-4532 Nov 26 j 04:28	13°≈51'59		min. Earth dist.	-4524 Oct 16 j 10:47		18.15355 AU
	-4531 Jan 17 j 10:58	15° ≈		direct	-4524 Dec 29 j 17:38	17° ∺ 48'13	
	4504.35	150	00 501 5		4500	2221/2:	00.0=: 0=
conjunction	-4531 Mar 13 j 19:11		0°-50'-1	conjunction	-4523 Apr 18 j 14:28		0°-37'-38
minimum elong	-4531 Mar 13 j 19:11	17 ≈32'49	0°50'11	minimum elong	-4523 Apr 18 j 14:28	22 π 01'01	U 3/42

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4523 in astronomical counting style is the year 4524 BCE in historical counting style. -4523 Apr 17 j 21:47 21° **)** 58'33 20.11900 AU conjunction -4515 May 26 j 12:02 28°**Υ**'08'06 0°-10'-43 max. Earth dist. -4523 Aug 06 j 20:56 26° **H** 15'18 minimum elong -4515 May 26 j 12:02 28° Υ 08'06 0°10'39 retrograde -4523 Oct 20 j 10:24 24° **)** 13'45 0°-40'-19 behind sun begin -4515 May 26 j 06:52 28°**Υ**07'20 opposition -4523 Oct 21 j 00:35 24° **光** 12'14 18.08425 AU -4515 May 26 j 17:12 28° Υ 08'53 min. Earth dist. behind sun end -4515 Jun 26 j 19:30 -4522 Jan 03 j 09:14 22°**)** 11'24 direct 0°X -4515 Sep 12 j 08:34 2°828'09 retrograde -4522 Apr 23 j 11:53 26° **∺** 25'48 0°-34'-56 -4515 Nov 24 j 20:28 conjunction opposition 0°**8**25'48 0°-9'-42 -4522 Apr 23 j 11:53 minimum elong 26°**)** €25'48 0°34'58 min. Earth dist. -4515 Nov 25 j 21:30 0°**႘**23'04 17.57134 AU max. Earth dist. -4522 Apr 22 j 16:50 26°**米**22'58 20.04928 AU -4515 Dec 04 j 18:25 30°RƳ -4522 Jul 02 j 22:18 28°Y20'21 $0^{\circ}\Upsilon$ direct -4514 Feb 08 j 11:32 -4522 Aug 11 j 13:27 retrograde 0°**Y**40′52 -4514 Apr 12 j 23:12 0°8 -4522 Sep 20 j 17:57 -4514 May 30 j 08:33 30°**₹**₩ max. Earth dist. 2°842'05 19.54610 AU -4522 Oct 25 j 00:00 28° **¥** 39'13 0°-37'-13 opposition min. Earth dist. -4522 Oct 25 j 17:01 28° ₩ 37'23 18.01438 AU conjunction -4514 May 31 j 14:23 2°**8**46'40 0°-6'-45 direct -4521 Jan 07 j 23:25 26° **∺** 36'25 minimum elong -4514 May 31 j 14:23 2°846'40 0°06'39 -4521 Apr 13 j 17:17 $0^{\circ}\Upsilon$ behind sun begin -4514 May 31 j 08:04 2°**8**45'43 behind sun end -4514 May 31 j 20:43 2°847'37 conjunction -4521 Apr 28 j 10:01 0°Υ′52'24 0°-32'-1 retrograde -4514 Sep 17 j 06:47 7°807'19 minimum elong -4521 Apr 28 j 10:01 0°**Υ**52'24 0°32'03 opposition -4514 Nov 29 j 16:19 5°805'00 0°-5'-13 max. Earth dist. -4521 Apr 27 j 12:31 0°**Υ**49'12 19.97944 AU min. Earth dist. -4514 Nov 30 j 18:09 5°802'10 17.52257 AU retrograde -4521 Aug 16 j 08:56 5°**Y**08'16 direct -4513 Feb 13 j 09:58 2°859'21 opposition -4521 Oct 29 i 14:14 3°**Υ**'06'28 0°-33'-52 max. Earth dist. -4513 Jun 04 i 09:30 7°**8**22'04 19.49964 AU min. Earth dist. -4521 Oct 30 i 08:12 3°**Y**04'31 17.94463 AU direct -4520 Jan 12 j 16:40 1°Y03'13 conjunction -4513 Jun 05 i 17:07 7°**と**26'57 0°-2'-41 max. Earth dist. -4520 May 01 j 09:49 5°**Υ**17'19 19.90990 AU minimum elong -4513 Jun 05 i 17:07 7°**8**26'57 0°02'35 behind sun begin -4513 Jun 05 j 10:21 7°**8**25'56 -4520 May 02 j 08:58 5°Υ20'47 0°-28'-53 behind sun end -4513 Jun 05 j 23:53 7°**と**27'58 conjunction -4520 May 02 j 08:58 5°**Y**20'47 retrograde -4513 Sep 22 j 04:37 11°**8**48'10 minimum elong 0°28'53 -4520 Aug 20 j 02:44 9°Y37'23 -4513 Dec 04 j 13:05 9°**8**45'54 0°00'-39 retrograde opposition -4520 Nov 02 j 05:19 7°**Υ**'35'27 0°-30'-17 min. Earth dist. -4513 Dec 05 j 15:31 9°**8**43'01 17.47842 AU opposition -4520 Nov 03 j 01:45 7°**Υ**33'14 17.87567 AU -4512 Jan 26 j 20:13 min. Earth dist. asc. node 7°**8**53'24 5°**Y**31'46 -4512 Feb 18 j 09:17 -4519 Jan 16 j 08:55 7°**8**40'04 direct direct -4519 May 06 j 06:59 9°**Υ**47'03 19.84176 AU max. Earth dist. -4512 Jun 09 j 20:20 12°**8**08'52 0°01'32 conjunction -4519 May 07 j 08:25 9°**Y**'50'52 0°-25'-33 -4512 Jun 09 j 20:21 12°**8**08'52 0°01'41 conjunction minimum elong -4519 May 07 j 08:25 -4512 Jun 09 j 13:35 12°**8**07'51 9°**Υ**'50'52 0°25'33 minimum elong behind sun begin -4512 Jun 10 j 03:06 12°809'53 -4519 Aug 24 j 22:49 14°Υ08'13 retrograde behind sun end opposition -4519 Nov 06 j 21:05 12°**Υ**06'08 0°-26'-30 max. Earth dist. -4512 Jun 08 j 13:25 12°804'04 19.45759 AU min. Earth dist. -4519 Nov 07 j 18:10 12°**Υ**03'51 17.80851 AU -4512 Jul 29 j 13:42 15°8 direct -4518 Jan 21 j 03:34 10°**Υ**02'02 retrograde -4512 Sep 26 j 03:58 16°\(\alpha \)30'35 max. Earth dist. -4518 May 11 j 06:18 14°**Υ**18'42 19.77563 AU -4512 Nov 26 j 06:07 15°R₩ -4512 Dec 08 j 10:44 14°\28'24 0°03'56 opposition -4518 May 12 j 08:27 14° Υ 22'40 0° -22'-4 min. Earth dist. -4512 Dec 09 j 13:31 14°\(\mathbf{2}25'28\) 17.43848 AU conjunction -4518 May 12 j 08:27 14°**Υ**22'40 direct -4511 Feb 22 j 10:14 12°**8**22'26 minimum elong -4518 Aug 29 j 17:56 18°**Υ**40'42 -4511 May 15 j 00:24 15°8 retrograde -4518 Nov 11 j 13:47 16°**Υ**'38'31 0°-22'-32 opposition -4518 Nov 12 j 12:44 16° γ 36'01 17.74375 AU min. Earth dist. conjunction -4517 Jan 25 j 21:46 14°**Υ**'34'00 -4511 Jun 14 j 23:48 16°**8**52'17 direct minimum elong -4517 May 16 j 04:45 18° **Y** 51'48 19.71242 AU -4511 Jun 14 j 17:21 16°**8**51'19 max. Earth dist. behind sun begin behind sun end -4511 Jun 15 j 06:15 16°**8**53'16 $-4517 \text{ May } 17 \text{ i } 09:06 \quad 18^{\circ} \Upsilon 56'07 \quad 0^{\circ} -18' -24$ max. Earth dist. -4511 Jun 13 j 15:26 16°847'15 19.41976 AU conjunction -4517 May 17 i 09:06 18°**Υ**56'07 0°18'21 retrograde -4511 Oct 01 j 02:40 21°814'28 minimum elong -4517 Sep 03 j 14:38 23°**Y**14'51 opposition -4511 Dec 13 j 09:12 19°812'19 0°08'32 retrograde -4517 Nov 16 j 07:02 21°**Υ**12'34 0°-18'-23 -4511 Dec 14 j 12:42 19°\(\begin{align*} \delta 909'19 & 17.40287 \text{ AU} \end{align*} opposition min. Earth dist. -4517 Nov 17 j 06:30 21°**Υ**10'01 17.68228 AU min. Earth dist. direct -4510 Feb 27 j 11:05 17°**8**06'13 -4516 Jan 30 j 17:50 19°**Υ**07'41 direct max. Earth dist. -4510 Jun 18 j 19:51 21°832'04 19.38613 AU max. Earth dist. -4516 May 20 j 06:05 23°**Υ**26'56 19.65268 AU -4510 Jun 20 j 03:33 21°**8**37'01 0°09'46 conjunction -4510 Jun 20 j 03:33 21°**8**37'01 -4516 May 21 j 10:29 23°**Y**31'16 0°-14'-37 0°09'57 conjunction minimum elong -4516 May 21 j 10:29 23°**Υ**31'16 -4510 Jun 19 j 22:07 21°**8**36'11 minimum elong 0°14'34 behind sun begin -4516 May 21 j 07:49 23°**Y**30'52 -4510 Jun 20 j 08:58 21°**8**37'50 behind sun begin behind sun end behind sun end -4516 May 21 j 13:09 23°**Y**31'40 retrograde -4510 Oct 06 j 03:12 25°859'32 -4516 Sep 07 j 11:23 27° Υ 50'39 retrograde opposition -4510 Dec 18 j 08:25 23°857'28 opposition -4516 Nov 20 j 01:25 25°**Υ**48'20 0°-14'-6 min. Earth dist. -4510 Dec 19 j 11:41 23°854'29 17.37120 AU min. Earth dist. -4516 Nov 21 j 02:07 25°**Υ**45'38 17.62458 AU direct -4509 Mar 04 j 13:51 21°**8**51'14 -4515 Feb 03 j 14:07 23°**Y**43'08 max. Earth dist. -4509 Jun 23 j 22:52 26°8 17'42 19.35648 AU direct

max. Earth dist.

-4515 May 25 j 05:43 28°**Υ**03'27 19.59714 AU

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4509 in astronomical counting style is the year 4510 BCE in historical counting style. -4509 Jun 25 i 07:27 26°\(\alpha 22'49 \) 0°13'49 direct -4501 Apr 12 j 21:20 0°9507'40 conjunction -4509 Jun 25 j 07:27 26°**8**22'49 0°14'00 -4501 Aug 02 j 07:51 4°536'29 19.30638 AU minimum elong max. Earth dist. -4509 Jun 25 j 04:09 26°822'18 behind sun begin -4509 Jun 25 j 10:44 26°**8**23'19 -4501 Aug 03 j 06:21 4°940'03 0°40'45 behind sun end conjunction -4501 Aug 03 j 06:21 -4509 Aug 31 j 13:23 Π °0 minimum elong 4°9540'03 0°40'58 -4509 Oct 11 j 02:47 -4501 Nov 18 j 04:02 retrograde 0°**Ⅱ**45'36 retrograde 9°9502'12 -4509 Nov 21 j 18:38 30°**₹** -4500 Jan 30 j 23:37 opposition 7°**©**00'26 0°46'47 min. Earth dist. -4500 Jan 31 j 19:44 opposition -4509 Dec 23 j 08:20 28°**8**43'34 0°17'35 6°958'16 17.31681 AU min. Earth dist. -4509 Dec 24 j 12:21 28°**8**40'31 17.34378 AU direct -4500 Apr 17 j 01:09 4°954'10 direct -4508 Mar 08 j 15:36 26°**8**37'12 max. Earth dist. -4500 Aug 06 j 09:34 9°522'35 19.32806 AU -4508 Jun 10 j 20:37 $0^{\circ}\Pi$ -4508 Jun 28 j 03:31 -4500 Aug 07 j 07:04 max. Earth dist. 1°**Д**04'26 19.33123 AU conjunction 9°**5**26'00 0°43'04 -4500 Aug 07 j 07:04 minimum elong 9°925'59 0°43'17 conjunction -4508 Jun 29 j 11:24 1°**I**09'26 0°17'47 retrograde -4500 Nov 22 j 04:45 13°9547'48 opposition minimum elong -4508 Jun 29 j 11:24 1°**Ⅲ**09′26 0°17'58 -4499 Feb 04 j 02:35 11°**©**46'10 0°49'11 retrograde -4508 Oct 15 j 04:12 5°**Ⅲ**32′25 min. Earth dist. -4499 Feb 04 j 20:12 11°5544'17 17.34148 AU opposition -4508 Dec 27 j 08:53 3°**II**30'24 0°21'58 direct -4499 Apr 22 j 06:14 9°5540'09 min. Earth dist. -4508 Dec 28 j 11:57 3°**Ⅲ**27'27 17.32072 AU direct -4507 Mar 13 j 19:27 1°**I**I23′56 conjunction -4499 Aug 12 j 07:15 14°5511'20 0°45'05 max. Earth dist. -4507 Jul 03 j 07:23 5°**Д**51'39 19.31051 AU minimum elong -4499 Aug 12 j 07:15 14°511'20 max. Earth dist. -4499 Aug 11 j 13:02 14°508'27 19.35557 AU conjunction -4507 Jul 04 i 15:03 5°II56'38 0°21'39 retrograde -4499 Nov 27 i 03:46 18°532'44 minimum elong -4507 Jul 04 i 15:03 5°**Ⅱ**56'38 0°21'51 opposition -4498 Feb 09 i 05:43 16°531'16 0°51'15 retrograde -4507 Oct 20 i 03:58 10°**I**I19'43 min. Earth dist. -4498 Feb 09 i 22:05 16°\$29'31 17.37154 AU opposition -4506 Jan 01 i 09:59 8°**I**17'43 0°26'11 direct -4498 Apr 27 i 10:06 14°\$25'33 min. Earth dist. -4506 Jan 02 j 13:36 8°**Ш**14'43 17.30254 AU -4506 Mar 18 j 21:29 6°**Ⅱ**11'09 -4498 Aug 17 j 06:46 18°\$55'56 direct conjunction 0°46'47 max. Earth dist. -4506 Jul 08 j 11:42 10° ДЗ9'18 19.29492 AU -4498 Aug 17 j 06:46 18°\$55'56 minimum elong 0°46'59 max. Earth dist. -4498 Aug 16 j 13:30 18°553'12 19.38819 AU -4498 Dec 02 j 03:36 23°516'54 -4506 Jul 09 j 18:36 10° **1**44'11 0°25'21 conjunction retrograde -4497 Feb 14 j 08:39 21°\$15'34 0°52'58 minimum elong -4506 Jul 09 j 18:36 10°**Ⅲ**44'11 opposition -4497 Feb 14 j 22:52 21°514'04 17.40653 AU -4506 Oct 25 j 05:32 15°**Ⅲ**07'17 retrograde min. Earth dist. -4505 Jan 06 j 11:17 13°**Д**05'16 0°30'14 -4497 May 02 j 13:44 19°510'09 direct opposition min. Earth dist. -4505 Jan 07 j 13:22 13°**Д**02'26 17.28952 AU -4505 Mar 24 j 02:34 10°**Д**58'38 -4497 Aug 22 j 05:48 23°539'38 0°48'10 direct conjunction -4497 Aug 22 j 05:48 23°539'38 0°48'23 minimum elong -4505 Jul 14 j 21:57 15°**Ⅲ**31'50 0°28'53 -4497 Aug 21 j 15:42 23°537'25 19.42538 AU conjunction max. Earth dist. -4497 Dec 07 j 02:53 28°500'05 minimum elong -4505 Jul 14 j 21:57 15° **II** 31'50 0°29'06 retrograde max. Earth dist. -4505 Jul 13 j 16:18 15°**Д**27'09 19.28464 AU opposition -4496 Feb 19 j 11:47 25°558'55 0°54'19 retrograde -4505 Oct 30 j 04:41 19°**I** 54'52 min. Earth dist. -4496 Feb 20 j 00:13 25°557'36 17.44568 AU opposition -4504 Jan 11 j 13:18 17°**Д**52'52 0°34'04 direct -4496 May 06 j 17:40 23°553'50 min. Earth dist. -4504 Jan 12 j 15:31 17°**Д**50'01 17.28221 AU -4504 Mar 28 j 05:28 15°**Ⅱ**46'11 -4496 Aug 26 j 03:50 28°522'16 0°49'13 direct conjunction max. Earth dist. -4504 Jul 17 j 19:55 20° **I**I 14'50 19.28038 AU -4496 Aug 26 j 03:50 28°\$22'16 0°49'24 minimum elong max. Earth dist. -4496 Aug 25 j 14:57 28°\$20'14 19.46651 AU -4504 Jul 19 i 00:38 20°**I**I19'23 0°32'12 -4496 Sep 21 j 12:27 conjunction $0^{\circ}\Omega$ -4504 Jul 19 j 00:38 20°**Ⅱ**19'23 minimum elong 0°32'26 retrograde -4496 Dec 11 i 01:41 2°Ω42'10 -4504 Nov 03 i 05:45 24°**II**42'17 retrograde opposition -4495 Feb 23 i 14:39 0°Ω41'07 0°55'17 -4503 Jan 15 j 15:30 22°**Ⅱ**40'17 0°37'40 opposition min. Earth dist. -4495 Feb 24 i 01:09 0°Ω40'01 17.48870 AU min. Earth dist. -4503 Jan 16 j 15:29 22°**Д**37'41 17.28103 AU -4495 Mar 12 i 02:48 30°R\$ direct -4503 Apr 02 j 11:31 20°**Д**33'37 -4495 May 11 j 19:40 28°536'21 direct max. Earth dist. -4503 Jul 23 j 00:42 25°**Д**02'30 19.28238 AU -4495 Jul 08 j 13:26 $0^{\circ}\Omega$ conjunction -4503 Jul 24 j 03:05 25°**Ⅲ**06'40 0°35'19 conjunction -4495 Aug 31 j 01:21 3°Ω03'39 0°49'55 -4495 Aug 31 j 01:21 3°**Q**03'39 0°50'06 minimum elong -4503 Jul 24 j 03:05 25°**Ⅲ**06'40 0°35'31 minimum elong retrograde -4503 Nov 08 j 04:32 29°**Д**29'22 max. Earth dist. -4495 Aug 30 j 15:27 3°**Ω**02'05 19.51122 AU opposition -4502 Jan 20 j 18:00 27°**Ⅲ**27'25 0°41'00 retrograde -4495 Dec 16 j 00:49 7°**Ω**22'55 min. Earth dist. -4502 Jan 21 j 17:34 27°**Д**24'52 17.28637 AU -4494 Feb 28 j 17:02 5°**Ω**21'59 0°55'53 opposition -4502 Apr 07 j 15:07 25°**Ⅲ**20'49 -4494 Mar 01 j 01:21 direct min. Earth dist. 5°**Ω**21'06 17.53487 AU -4502 Jul 28 j 03:25 29°**П**49'33 19.29112 AU direct -4494 May 16 j 23:27 3°**Ω**17'33 max. Earth dist. conjunction -4502 Jul 29 j 04:54 29°**I**53'35 0°38'10 conjunction -4494 Sep 04 j 21:57 7°**Ω**43'35 0°50'18 minimum elong -4502 Jul 29 j 04:53 29°**Ⅲ**53'35 0°38'24 minimum elong -4494 Sep 04 j 21:57 7°**Ω**43'35 0°50'29 -4502 Jul 30 j 21:22 0 \circ \odot max. Earth dist. -4494 Sep 04 j 13:30 7°**Ω**42'15 19.55894 AU retrograde -4502 Nov 13 j 05:19 4°9516'02 retrograde -4494 Dec 20 j 21:58 12°**Ω**02'11 -4501 Jan 25 j 20:38 2°9514'09 0°44'02 -4493 Mar 05 j 19:15 $10^{\circ}\Omega$ 01'20 0° 56'06 opposition opposition min. Earth dist. -4501 Jan 26 j 17:39 2°511'52 17.29837 AU min. Earth dist. -4493 Mar 06 j 01:56 10°**Ω**00'38 17.58410 AU

-	nical year style is used: The		C	· //		, 1	
direct	-4493 May 22 j 00:23	-		retrograde	-4485 Jan 26 j 01:54		
	, ,			opposition	-4485 Apr 12 j 15:02		0°45'34
conjunction	-4493 Sep 09 j 17:39	12°Ω21'53	0°50'20	min. Earth dist.	-4485 Apr 12 j 02:53		
minimum elong	-4493 Sep 09 j 17:39			direct	-4485 Jun 28 j 16:06		
max. Earth dist.	-4493 Sep 09 j 12:02				,	•	
	-4493 Oct 24 j 18:03			conjunction	-4485 Oct 14 j 22:05	18° m 19'35	0°39'53
retrograde	-4493 Dec 25 j 20:08			minimum elong	-4485 Oct 14 j 22:05		
	-4492 Mar 01 j 11:18			max. Earth dist.	-4485 Oct 15 j 11:36	-	
opposition	-4492 Mar 09 j 20:58		0°55'56	retrograde	-4484 Jan 30 j 19:13	•	
min. Earth dist.	-4492 Mar 10 j 00:51			opposition	-4484 Apr 16 j 11:24		0°42'57
direct	-4492 May 26 j 03:59		17.0500.110	min. Earth dist.	-4484 Apr 15 j 20:08	-	
	-4492 Aug 11 j 20:23			direct	-4484 Jul 02 j 11:22	-	10.1 15 05 110
conjunction	-4492 Sep 13 j 12:24	16° Ω 58'25	0°50'03	conjunction	-4484 Oct 18 j 10:08	22° m 40'54	0°37'26
minimum elong	-4492 Sep 13 j 12:24			minimum elong	-4484 Oct 18 j 10:08	22° m/40'54	0°37'29
max. Earth dist.	-4492 Sep 13 j 08:48			max. Earth dist.	-4484 Oct 19 j 02:21	22° m 43'21	20.18526 AU
retrograde	-4492 Dec 29 j 15:24			retrograde	-4483 Feb 03 j 09:34	26° m 51'38	
opposition	-4491 Mar 14 j 22:08	19° Ω 14'47	0°55'25	opposition	-4483 Apr 21 j 07:01	24° m 51'38	0°40'06
min. Earth dist.	-4491 Mar 15 j 00:30			min. Earth dist.	-4483 Apr 20 j 14:56		
direct	-4491 May 31 j 03:46			direct	-4483 Jul 07 j 03:55	-	
	, ,				3	•	
conjunction	-4491 Sep 18 j 06:10	21° Ω 33'01	0°49'26	conjunction	-4483 Oct 22 j 21:22	27° Mp 00'25	0°34'48
minimum elong	-4491 Sep 18 j 06:10			minimum elong	-4483 Oct 22 j 21:22	27° Mp 00'25	0°34'49
max. Earth dist.	-4491 Sep 18 j 05:15	21° Ω 32'52	19.71947 AU	max. Earth dist.	-4483 Oct 23 j 14:35	27° m 03'01	20.25568 AU
retrograde	-4490 Jan 03 j 11:42	25° Ω 49'21			-4483 Dec 16 j 22:12	0∘ ⊽	
opposition	-4490 Mar 19 j 22:35	23° Ω 48'37	0°54'33	retrograde	-4482 Feb 08 j 01:56	1° ≏ 10′24	
min. Earth dist.	-4490 Mar 19 j 21:40	23° Ω 48'43	17.74875 AU		-4482 Apr 05 j 03:23	30°R, Mp	
direct	-4490 Jun 05 j 06:19	21° Ω 45′29		min. Earth dist.	-4482 Apr 25 j 07:08	29° m 12'23	18.29048 AU
				opposition	-4482 Apr 26 j 01:49	29° Mp 10'30	0°37'02
conjunction	-4490 Sep 22 j 22:58	26° Ω 05'37	0°48'32	direct	-4482 Jul 11 j 21:33	27° m 10'43	
minimum elong	-4490 Sep 22 j 22:58	26° Ω 05'37	0°48'40		-4482 Oct 05 j 09:37	0∘ ⊽	
max. Earth dist.	-4490 Sep 23 j 00:35	26° Ω 05'52	19.77871 AU				
	-4490 Dec 11 j 03:01	0° m)		conjunction	-4482 Oct 27 j 07:59	1° ≏ 18'10	0°31'58
retrograde	-4489 Jan 08 j 05:09	0°m/21'09		minimum elong	-4482 Oct 27 j 08:00	1° ≏ 18'10	0°31'58
	-4489 Feb 06 j 00:31	30°R€		max. Earth dist.	-4482 Oct 28 j 03:40	1° ≏ 21'08	20.32473 AU
opposition	-4489 Mar 24 j 22:30	28° Ω 20′28	0°53'22	retrograde	-4481 Feb 12 j 15:07	5° ≏ 27'23	
min. Earth dist.	-4489 Mar 24 j 20:01	28° Ω 20'43	17.80960 AU	opposition	-4481 Apr 30 j 20:02	3° ≏ 27'35	0°33'47
direct	-4489 Jun 10 j 04:32	26° Ω 17'41		min. Earth dist.	-4481 Apr 30 j 00:41	3° ॒ 29'32	18.35869 AU
	-4489 Sep 17 j 20:52	0° m		direct	-4481 Jul 16 j 12:50	1° ≏ 28'12	
						_	
conjunction	-4489 Sep 27 j 14:54	0° Mp 36'13	0°47'20	conjunction	-4481 Oct 31 j 17:58	5° Ω 34'07	0°28'59
minimum elong	-4489 Sep 27 j 14:54	0° Mp 36'13	0°47'27	minimum elong	-4481 Oct 31 j 17:58	5° Ω 34'07	0°28'58
max. Earth dist.	-4489 Sep 27 j 19:01		19.84115 AU	max. Earth dist.	-4481 Nov 01 j 14:13		20.39200 AU
retrograde	-4488 Jan 13 j 00:09	4° m 50'56		retrograde	-4480 Feb 17 j 05:57	9° Ω 42'36	
opposition	-4488 Mar 28 j 21:41	2° m/50'19		opposition	-4480 May 04 j 13:19	7° Ω 42'51	0°30'23
min. Earth dist.	-4488 Mar 28 j 15:34	~	17.87346 AU	min. Earth dist.	-4480 May 03 j 15:49		18.42489 AU
direct	-4488 Jun 14 j 04:30	0°Mp47'56		direct	-4480 Jul 20 j 04:55	5° ≏ 43'49	
conjunction	-4488 Oct 01 j 05:53	5° Mp 04'52	0°45'51	conjunction	-4480 Nov 04 j 03:21	9° ≏ 48'16	0°25'51
minimum elong	-4488 Oct 01 j 05:53	5° m) 04'52	0°45'57	minimum elong	-4480 Nov 04 j 03:21	9° Ω 48'16	0°25'50
max. Earth dist.	-4488 Oct 01 j 03:53		19.90641 AU	max. Earth dist.	-4480 Nov 05 j 01:55		20.45690 AU
retrograde	-4487 Jan 16 j 16:30	9° m) 18'47	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	retrograde	-4479 Feb 20 j 18:09	13° ≏ 56'01	200070710
opposition	-4487 Apr 02 j 20:16	7° m)18'15	0°50'02	min. Earth dist.	-4479 May 08 j 07:47		18.48852 AU
min. Earth dist.	-4487 Apr 02 j 12:42		17.94006 AU	opposition	-4479 May 09 j 05:51	11° ⊆ 56'18	
direct	-4487 Jun 19 j 00:43	5° Mp 16'17	17.5 1000110	direct	-4479 Jul 24 j 18:52	9° Ω 57'35	0 2000
					,		
conjunction	-4487 Oct 05 j 20:06	9° m 31'36	0°44'06	conjunction	-4479 Nov 08 j 12:00	14° ≏ 00'36	0°22'37
minimum elong	-4487 Oct 05 j 20:06	9° ™ 31'36	0°44'12	minimum elong	-4479 Nov 08 j 12:00	14° ≏ 00'36	0°22'34
max. Earth dist.	-4487 Oct 06 j 05:08	9° m ,32′59	19.97422 AU	max. Earth dist.	-4479 Nov 09 j 10:54	14° ≙ 04'01	20.51932 AU
retrograde	-4486 Jan 21 j 10:23	13° m 44'42		retrograde	-4478 Feb 25 j 07:06	18° ≏ 07'37	
opposition	-4486 Apr 07 j 17:49	11° m)44'18	0°47'56	opposition	-4478 May 13 j 21:20	16° ≏ 07'55	0°23'10
min. Earth dist.	-4486 Apr 07 j 06:52	11° Mp 45'26	18.00878 AU	min. Earth dist.	-4478 May 12 j 21:30	16° ≙ 10'19	18.54973 AU
direct	-4486 Jun 23 j 21:55	9° m 42'46		direct	-4478 Jul 29 j 08:57	14° ≙ 09'30	
conjunction	-4486 Oct 10 j 09:35	13° m 56'30	0°42'07	conjunction	-4478 Nov 12 j 20:07		0°19'17
minimum elong	-4486 Oct 10 j 09:35	13° m 56'30	0°42'11	minimum elong	-4478 Nov 12 j 20:07		
max. Earth dist.	-4486 Oct 10 j 21:28	13° m)58'19	20.04373 AU	max. Earth dist.	-4478 Nov 13 j 21:21	18° £ 14'53	20.57927 AU

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	ical year style is used: Th	-	in astronomical cou				
retrograde	-4477 Mar 01 j 18:18			min. Earth dist.	-4471 Jun 11 j 06:46		
min. Earth dist.	-4477 May 17 j 11:37			opposition	-4471 Jun 12 j 12:39		0°-3'-57
opposition	-4477 May 18 j 12:10		0°19'25	direct	-4471 Aug 27 j 09:33		
direct	-4477 Aug 02 j 21:44	18° ≏ 19'37			-4471 Nov 09 j 13:17	15° M ₊	
conjunction	-4477 Nov 17 j 03:26	22° Ω 19'56	0°15'52	conjunction	-4471 Dec 10 j 15:57	16°M.44'34	0°-5'-21
minimum elong	-4477 Nov 17 j 03:25			minimum elong	-4471 Dec 10 j 15:57		0°05'31
behind sun begin	-4477 Nov 17 j 01:48		0 12 17	behind sun begin	-4471 Dec 10 j 09:37		0 00 3 1
behind sun end	-4477 Nov 17 j 05:03			behind sun end	-4471 Dec 10 j 22:16		
max. Earth dist.	-4477 Nov 18 j 05:02		20 63712 AU	max. Earth dist.	-4471 Dec 11 j 22:44		20 93755 AU
retrograde	-4476 Mar 05 j 06:01			retrograde	-4470 Mar 30 j 17:09		
min. Earth dist.	-4476 May 20 j 23:58		18.66550 AU	opposition	-4470 Jun 16 j 22:31		0°-7'-50
opposition	-4476 May 22 j 02:08			min. Earth dist.	-4470 Jun 15 j 16:31		
direct	-4476 Aug 06 j 09:32			direct	-4470 Aug 31 j 16:20		
conjunction	-4476 Nov 20 j 10:30	26° ≏ 27'08	0°12'24	conjunction	-4470 Dec 14 j 21:26		0°-8'-49
minimum elong	-4476 Nov 20 j 10:30	26° ≏ 27'08	0°12'19	minimum elong	-4470 Dec 14 j 21:26		0°09'01
behind sun begin	-4476 Nov 20 j 06:06	26° ≏ 26'30		behind sun begin	-4470 Dec 14 j 15:48		
behind sun end	-4476 Nov 20 j 14:55	26° ≏ 27'46		behind sun end	-4470 Dec 15 j 03:04		
max. Earth dist.	-4476 Nov 21 j 14:23		20.69293 AU	max. Earth dist.	-4470 Dec 16 j 05:30		20.97649 AU
	-4475 Feb 01 j 10:01	0°M₊		retrograde	-4469 Apr 04 j 00:45		
retrograde	-4475 Mar 09 j 16:13	0°M32'12		min. Earth dist.	-4469 Jun 20 j 01:55		
	-4475 Apr 15 j 21:22	30° ₹ Ω		opposition	-4469 Jun 21 j 07:54		0°-11'-40
opposition	-4475 May 26 j 15:06	28° ≏ 32'31		direct	-4469 Sep 04 j 23:57	20°M52'34	
min. Earth dist.	-4475 May 25 j 12:13		18.72038 AU				
direct	-4475 Aug 10 j 20:56	26° Ω 34'54		conjunction	-4469 Dec 19 j 02:45		0°-12'-15
	-4475 Nov 15 j 08:37	0° M ₊		minimum elong	-4469 Dec 19 j 02:44		0°12'27
	445534 04:46.50	00 m 20150	0000155	behind sun begin	-4469 Dec 18 j 22:24		
conjunction	-4475 Nov 24 j 16:58	0°M32'52		behind sun end	-4469 Dec 19 j 07:04		
minimum elong	-4475 Nov 24 j 16:58	0°M32'52	0°08'49	max. Earth dist.	-4469 Dec 20 j 09:37		21.01083 AU
behind sun begin	-4475 Nov 24 j 11:18	0°M32'03		retrograde	-4468 Apr 07 j 10:13		10.00650 177
behind sun end	-4475 Nov 24 j 22:38	0°M33'40	20.74606.444	min. Earth dist.	-4468 Jun 23 j 11:22		
max. Earth dist.	-4475 Nov 25 j 20:54		20.74686 AU	opposition	-4468 Jun 24 j 16:51		0°-15'-26
retrograde	-4474 Mar 14 j 02:56	4°M37'24	10 77227 ATT	direct	-4468 Sep 08 j 05:53	24°IIL52'38	
min. Earth dist.	-4474 May 29 j 23:19	2°IL40'34 2°IL37'45	18.77337 AU 0°07'49	conjunction	-4468 Dec 22 j 08:17	200 m 45106	0°-15'-38
opposition direct	-4474 May 31 j 03:29 -4474 Aug 15 j 06:33	0°M40'24	0 0/49	minimum elong	-4468 Dec 22 j 08:17		0 -13 -38 0°15'49
direct	-44/4 Aug 13 J 00.33	0 11640 24		behind sun begin	-4468 Dec 22 j 06:57		0 13 49
conjunction	-4474 Nov 28 j 23:04	4° M 37'19	0°05'24	behind sun end	-4468 Dec 22 j 00:37		
minimum elong	-4474 Nov 28 j 23:04	4°M37'19	0°05'17	max. Earth dist.	-4468 Dec 23 j 15:52		21.03991 AU
behind sun begin	-4474 Nov 28 j 16:44	4°M36'24	0 03 17	max. Earth dist.	-4467 Jan 13 j 10:01	0° ₹	21.03//1 AO
behind sun end	-4474 Nov 29 j 05:25	4°MJ38'13		retrograde	-4467 Apr 11 j 17:36	2° х 47'10	
max. Earth dist.	-4474 Nov 30 j 05:06		20.79866 AU	min. Earth dist.	-4467 Jun 27 j 19:59		19.05283 AU
retrograde	-4473 Mar 18 j 12:22	8°M41'21	20.79000110	opposition	-4467 Jun 29 j 01:05	0° х 47′56	0°-19'-8
min. Earth dist.	-4473 Jun 03 j 10:22		18.82398 AU	оррозии	-4467 Jul 19 j 15:09	30°RM₁	0 17 0
opposition	-4473 Jun 04 j 15:13	6°M41'46	0°03'53	direct	-4467 Sep 12 j 12:45	28°M52'04	
direct	-4473 Aug 19 j 16:47	4°M44'43	0 03 03		-4467 Nov 03 j 20:27	0° ⊼ ¹	
					, j		
conjunction	-4473 Dec 03 j 04:53	8°M40'39	0°01'50	conjunction	-4467 Dec 26 j 13:38	2° ҂ 144′03	0°-18'-55
minimum elong	-4473 Dec 03 j 04:52	8°M40'39	0°01'43	minimum elong	-4467 Dec 26 j 13:37	2° ∡ ¹44'03	0°19'07
behind sun begin	-4473 Dec 02 j 22:19	8°M39'44		max. Earth dist.	-4467 Dec 27 j 19:35	2° ∡ ¹48'20	21.06347 AU
behind sun end	-4473 Dec 03 j 11:25	8°M41'35		retrograde	-4466 Apr 16 j 01:59	6° ∡ ¹45'56	
max. Earth dist.	-4473 Dec 04 j 10:39	8°M45'00	20.84807 AU	min. Earth dist.	-4466 Jul 02 j 04:54	4° ∡ ¹49'30	19.07364 AU
retrograde	-4472 Mar 21 j 22:40	12°M44'16		opposition	-4466 Jul 03 j 09:08	4° ∡ ¹46'40	0°-22'-43
desc. node	-4472 Jun 03 j 19:09	10°M55'03		direct	-4466 Sep 16 j 17:49	2° ∡ 750′50	
min. Earth dist.	-4472 Jun 06 j 20:40	10° ™ 47'42	18.87209 AU				
opposition	-4472 Jun 08 j 02:14	10°M44'45	0°00'-2	conjunction	-4466 Dec 30 j 18:58	6° ∡ ¹42'26	0°-22'-6
direct	-4472 Aug 23 j 00:42	8°M47'57		minimum elong	-4466 Dec 30 j 18:58	6° ≯ 42'26	0°22'18
				max. Earth dist.	-4465 Jan 01 j 01:31		21.08148 AU
conjunction	-4472 Dec 06 j 10:35	12°M43'02		retrograde	-4465 Apr 20 j 09:32	10° ₹ 44'09	00.50
minimum elong	-4472 Dec 06 j 10:35	12°M43'02	0°01'58	opposition	-4465 Jul 07 j 16:39	8° ∡ 744'49	0°-26'-10
behind sun begin	-4472 Dec 06 j 04:02	12°M42'06		min. Earth dist.	-4465 Jul 06 j 12:49	8° ₹ 47'37	19.08890 AU
_	4.450 E					6° ∡¹ 48'59	
behind sun end	-4472 Dec 06 j 17:08	12°M43'57	20.00456.433	direct	-4465 Sep 21 j 00:20	0 🗴 40 39	
_	-4472 Dec 07 j 18:04	12°M47'36	20.89456 AU				00 251 10
behind sun end max. Earth dist.	-4472 Dec 07 j 18:04 -4471 Jan 17 j 03:44	12°M47'36 15°M	20.89456 AU	conjunction	-4464 Jan 04 j 00:19	10° х ⁴40'16	0°-25'-10
behind sun end	-4472 Dec 07 j 18:04	12°M47'36 15°M 16°M46'14	20.89456 AU			10° х 40′16 10° х 40′16	0°25'24

Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4464 in astronomical counting style is the year 4465 BCE in historical counting style. -4464 Apr 23 i 17:12 14° ₹ 41'52 retrograde -4456 May 26 j 10:02 16°る23'18 retrograde opposition -4464 Jul 10 j 23:39 12°**х** 42'27 0°-29'-30 -4456 Aug 11 j 23:16 14°る23'36 0°-49'-54 opposition min. Earth dist. min. Earth dist. -4464 Jul 09 j 20:58 12° ₹ 45'08 19.09927 AU -4456 Aug 11 j 05:19 14°る25'26 19.03390 AU -4464 Sep 24 j 04:47 10° ₹ 46'34 -4456 Oct 25 j 14:40 12°₹27'05 direct direct -4455 Feb 08 j 11:45 16°る20'15 0°-45'-53 -4463 Jan 07 j 05:53 14° **₹** 37'38 0°-28'-7 conjunction conjunction -4455 Feb 08 j 11:45 16°**ට**20'15 0°46'07 -4463 Jan 07 j 05:53 14° **₹** 37'38 minimum elong 0°28'20 minimum elong -4463 Jan 08 j 11:11 14°**∡**′41'48 21.10221 AU max. Earth dist. max. Earth dist. -4455 Feb 09 j 07:54 16°る23'07 21.02031 AU retrograde -4463 Apr 28 j 00:42 18°**尽** 39'09 retrograde -4455 May 30 j 20:09 20°る23'31 min. Earth dist. -4463 Jul 14 j 03:54 16° ₹ 42'19 19.10496 AU opposition -4455 Aug 16 j 05:03 18°**る**23'47 0°-51'-30 opposition -4463 Jul 15 j 06:15 16°**х** 39'40 0°-32'-41 min. Earth dist. -4455 Aug 15 j 12:18 18°**궁**25'30 19.00606 AU -4463 Sep 28 j 10:23 14° ₹ 43'44 -4455 Oct 29 j 20:30 16°**♂**27'07 direct direct conjunction -4462 Jan 11 j 11:16 18° ₹34'41 0°-30'-55 conjunction -4454 Feb 12 j 20:33 20°る20'58 0°-47'-13 minimum elong -4462 Jan 11 j 11:16 18° ₹ 34'41 0°31'10 minimum elong -4454 Feb 12 j 20:33 20°る20'58 0°47'26 max. Earth dist. -4462 Jan 12 j 14:48 18° ₹38'36 21.10581 AU max. Earth dist. -4454 Feb 13 j 13:30 20°る23'22 20.98986 AU retrograde -4462 May 02 j 08:12 22°**尽** 36'12 retrograde -4454 Jun 04 j 05:21 24°₹24'41 min. Earth dist. -4462 Jul 18 j 11:26 20° ₹ 39'10 19.10661 AU opposition -4454 Aug 20 j 11:09 22°る24'53 opposition -4462 Jul 19 j 12:38 20°**✗** 36'38 0°-35'-42 min. Earth dist. -4454 Aug 19 j 20:58 22°る26'20 18.97293 AU direct -4462 Oct 02 j 14:31 18° ₹ 40'37 direct -4454 Nov 03 j 00:21 20°る27'59 conjunction -4461 Jan 15 i 17:08 22° ₹31'35 0°-33'-35 conjunction -4453 Feb 17 i 06:18 24°る22'36 0°-48'-20 minimum elong -4461 Jan 15 i 17:08 22° ₹31'35 0°33'49 minimum elong -4453 Feb 17 j 06:18 24°る22'36 0°48'33 max. Earth dist. -4461 Jan 16 j 21:03 22° ₹35'33 21.10546 AU max. Earth dist. -4453 Feb 17 j 22:09 24°る24'51 20.95403 AU retrograde -4461 May 06 j 15:53 26° ₹33'09 retrograde -4453 Jun 08 j 15:50 28°る26'46 -4461 Jul 23 j 18:38 24° **7**33'32 0°-38'-33 -4453 Aug 24 j 17:08 26°る26'53 0°-53'-58 opposition opposition -4461 Jul 22 j 17:47 24° ₹36'03 19.10432 AU min. Earth dist. -4453 Aug 24 j 04:18 26°る28'12 18.93434 AU min Earth dist -4461 Oct 06 j 19:13 22° ₹37'28 direct -4453 Nov 07 j 06:40 24°る29'43 direct -4460 Jan 19 j 23:05 26° ₹728'31 0°-36'-5 -4452 Feb 21 j 16:29 28°る25'09 0°-49'-12 conjunction conjunction -4460 Jan 19 j 23:05 26° ₹28'31 0°36'19 -4452 Feb 21 j 16:29 28° 중25'09 0°49'25 minimum elong minimum elong -4452 Feb 22 j 04:52 28°중26'55 20.91294 AU max. Earth dist. max. Earth dist. -4460 Apr 04 j 08:31 0°る -4452 Mar 21 j 02:42 0°≈ -4460 May 09 j 23:47 0°**る**30'14 -4452 Jun 12 j 01:46 retrograde retrograde 2°≈29'50 -4460 Jun 15 j 05:47 30°R 🗷 -4452 Aug 27 j 23:29 opposition 0°≈29'48 0°-54'-49 -4460 Jul 26 j 01:07 28°**尽** 32'56 19.09835 AU -4452 Aug 27 j 13:23 min. Earth dist. min. Earth dist. 0°≈30'50 18.89078 AU -4460 Jul 27 j 00:35 28° **₹** 30'34 0°-41'-13 -4452 Sep 09 j 03:42 30°R ব opposition direct -4460 Oct 09 j 22:58 26° ₹34'25 direct -4452 Nov 10 j 11:57 28°る32'19 -4459 Jan 15 j 16:23 0°궁 -4451 Jan 09 j 11:37 conjunction -4459 Jan 23 j 05:34 0°る25'42 0°-38'-25 conjunction -4451 Feb 25 j 03:23 2°≈28'39 0°-49'-50 -4459 Jan 23 j 05:34 0°る25'42 0°38'39 minimum elong -4451 Feb 25 j 03:23 2°**≈**28'39 0°50'02 minimum elong max. Earth dist. -4459 Jan 24 j 07:35 0°る29'23 21.09342 AU max. Earth dist. -4451 Feb 25 j 14:38 2°≈30'15 20.86707 AU -4459 May 14 j 07:54 4°る27'35 -4451 Jun 16 j 12:09 retrograde retrograde 6°≈33'50 -4459 Jul 30 j 07:17 2°る30'14 19.08842 AU -4451 Sep 01 j 05:47 4°≈33'39 0°-55'-23 min. Earth dist. opposition opposition -4459 Jul 31 i 06:10 2°**ප**27'55 0°-43'-42 min. Earth dist. -4451 Aug 31 i 20:53 4°≈34'34 18.84269 AU -4459 Oct 14 i 03:29 direct 0°る31'42 direct -4451 Nov 14 i 18:35 2°≈35'50 4°**ට**23'18 0°-40'-35 conjunction -4458 Jan 27 i 12:14 conjunction -4450 Mar 01 j 14:41 6°≈33'07 0°-50'-12 minimum elong -4458 Jan 27 i 12:13 4°る23'18 0°40'48 minimum elong -4450 Mar 01 i 14:41 6°**≈**33'07 0°50'25 6°≈34'15 20.81715 AU max. Earth dist. -4458 Jan 28 j 11:58 4°る26'40 21.08164 AU max. Earth dist. -4450 Mar 01 j 22:38 -4458 May 18 j 16:11 8°**궁**25'28 retrograde -4450 Jun 20 j 22:49 10°≈38'52 retrograde -4458 Aug 04 j 11:56 6°**ප**25'46 0°-45'-59 -4450 Sep 05 j 12:27 8°≈38'30 0°-55'-40 opposition opposition min. Earth dist. -4458 Aug 03 j 14:47 6°る27'55 19.07467 AU min. Earth dist. -4450 Sep 05 j 06:13 8°≈39'09 18.79105 AU direct -4458 Oct 18 j 06:39 4°る29'28 direct -4450 Nov 19 j 00:47 6°≈40'18 conjunction -4457 Jan 31 j 19:27 8°**ප**21'30 0°-42'-33 conjunction -4449 Mar 06 j 02:49 10°≈38'39 0°-50'-20 -4457 Jan 31 j 19:27 8°る21'30 0°42'47 -4449 Mar 06 j 02:49 10°≈38'39 minimum elong minimum elong 0°50'30 -4457 Feb 01 j 19:03 8°る24'51 21.06580 AU max. Earth dist. -4449 Mar 06 j 09:45 10°≈39'39 max. Earth dist. 20.76393 AU -4457 May 23 j 01:20 12°る23'59 -4449 Jun 25 j 09:46 14°≈44'59 retrograde retrograde -4457 Aug 08 j 17:35 10°る24'17 0°-48'-3 opposition opposition -4449 Sep 09 j 19:18 12°≈44'27 0°-55'-40 min. Earth dist. -4457 Aug 07 j 21:19 10°**る**26'21 19.05656 AU min. Earth dist. -4449 Sep 09 j 14:06 12°≈45'00 18.73629 AU direct -4457 Oct 22 j 11:45 8°**る**27'54 direct -4449 Nov 23 j 08:19 10°≈45'53 conjunction -4456 Feb 05 j 03:14 12°る20'27 0°-44'-19 conjunction -4448 Mar 09 j 15:34 14°≈45'21 0°-50'-12 minimum elong -4456 Feb 05 j 03:13 12°る20'27 0°44'32 -4448 Mar 09 j 15:34 14°≈45'21 minimum elong max. Earth dist. -4456 Feb 06 j 00:05 12°る23'24 21.04550 AU max. Earth dist. -4448 Mar 09 j 19:15 14°≈45'52 20.70790 AU

Attention astronom	nical year style is used: Th	ne vear -4448	in astronomical cou	inting style is the year	4449 BCE in historical of	counting style	
recention, astronon	-4448 Mar 13 j 21:30	-	in astronomical co	conjunction	-4440 Apr 14 j 03:36		
retrograde	-4448 Jun 28 j 20:45			minimum elong	-4440 Apr 14 j 03:36		
opposition	-4448 Sep 13 j 02:32		0°-55'-23	max. Earth dist.	-4440 Apr 13 j 13:05		
min. Earth dist.	-4448 Sep 13 j 00:00			retrograde	-4440 Aug 02 j 12:23		20.20140 AC
mm. Latin dist.	-4448 Nov 09 j 21:54		10.07710 AC	opposition	-4440 Oct 16 j 07:55		0°-42'-43
dimont	-4448 Nov 26 j 15:23	•		min. Earth dist.	-4440 Oct 16 j 21:09		
direct				direct	-4440 Oct 16 j 21.09		18.10070 AU
	-4448 Dec 13 j 08:51	13 🌤			-4439 Apr 18 j 07:26		20 12166 ATT
aaniumatian	4447 Mar. 14 : 05:10	1000052121	00 40! 40	max. Earth dist.	-4439 Apr 18 J 07.20	22 X 3/13	20.13100 AU
conjunction	-4447 Mar 14 j 05:10	18°≈53'21	0°-49'-48		4420 4 10:00.04	220 1/ 50142	00 271 14
minimum elong	-4447 Mar 14 j 05:10	18°≈53'21	0°49'58	conjunction	-4439 Apr 19 j 00:04		0°-37'-14
max. Earth dist.	-4447 Mar 14 j 07:47		20.64975 AU	minimum elong	-4439 Apr 19 j 00:04		0°37'16
retrograde	-4447 Jul 03 j 09:00	23°≈01'00	00.541.50	retrograde	-4439 Aug 07 j 06:23		00 201 52
opposition	-4447 Sep 17 j 10:09	21°≈00'10		opposition	-4439 Oct 20 j 20:34		
min. Earth dist.	-4447 Sep 17 j 08:30		18.62004 AU	min. Earth dist.	-4439 Oct 21 j 10:45		18.09642 AU
direct	-4447 Dec 01 j 00:06	19° ≈ 00'51		direct	-4438 Jan 03 j 19:26	23° ★ 09'57	
conjunction	-4446 Mar 18 j 19:13		0°-49'-9	conjunction	-4438 Apr 23 j 21:10		0°-34'-31
minimum elong	-4446 Mar 18 j 19:13		0°49'18	minimum elong	-4438 Apr 23 j 21:10		0°34'34
max. Earth dist.	-4446 Mar 18 j 18:46		20.58985 AU	max. Earth dist.	-4438 Apr 23 j 02:01		20.06105 AU
retrograde	-4446 Jul 07 j 20:36				-4438 Jun 09 j 14:50	0 ° Υ	
opposition	-4446 Sep 21 j 18:24	25°≈10′13	0°-53'-58	retrograde	-4438 Aug 11 j 22:31	1° Ƴ 38'57	
min. Earth dist.	-4446 Sep 21 j 19:24		18.55946 AU		-4438 Oct 16 j 13:47	*	
direct	-4446 Dec 05 j 07:56	23° ≈ 10′32		opposition	-4438 Oct 25 j 10:03		
				min. Earth dist.	-4438 Oct 26 j 03:05		18.02576 AU
conjunction	-4445 Mar 23 j 10:26	27° ≈ 13'50	0°-48'-14	direct	-4437 Jan 08 j 09:41	27°) ₹34'32	
minimum elong	-4445 Mar 23 j 10:26	27° ≈ 13′50	0°48'23		-4437 Mar 28 j 01:39	$0^{\circ}\mathbf{\Upsilon}$	
max. Earth dist.	-4445 Mar 23 j 08:49	27° ≈ 13'36	20.52864 AU				
	-4445 May 14 j 12:07	0°) €		conjunction	-4437 Apr 28 j 19:08	1° Y 50′14	0°-31'-35
retrograde	-4445 Jul 12 j 10:32	1°) 22′58		minimum elong	-4437 Apr 28 j 19:08	1° Y 50′14	0°31'36
	-4445 Sep 10 j 19:40	30°R≈		max. Earth dist.	-4437 Apr 27 j 21:52	1° Y 47'04	19.99055 AU
opposition	-4445 Sep 26 j 02:54	29° ≈ 21'55	0°-52'-50	retrograde	-4437 Aug 16 j 17:38	6° Y 05'54	
min. Earth dist.	-4445 Sep 26 j 04:53	29° ≈ 21'43	18.49751 AU	opposition	-4437 Oct 30 j 00:00	4° Y 04'05	0°-33'-23
direct	-4445 Dec 09 j 18:08	27° ≈ 21'53		min. Earth dist.	-4437 Oct 30 j 17:50	4° Υ 02'10	17.95553 AU
	-4444 Mar 01 j 18:32	0°) €		direct	-4436 Jan 13 j 03:06	2° Y '00'53	
	-4444 Mar 01 j 18:32	0° \		direct	-4436 Jan 13 j 03:06	2° Y 00′53	
conjunction	, and the second	0° ∺ 1° ∺ 26'38	0°-47'-3	direct	•	2°Υ00'53 6°Υ18'10	0°-28'-27
conjunction minimum elong	-4444 Mar 27 j 02:27			conjunction	-4436 May 02 j 17:50		0°-28'-27 0°28'28
conjunction minimum elong max. Earth dist.	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27	1° ∺ 26'38 1° ∺ 26'38		conjunction minimum elong	-4436 May 02 j 17:50 -4436 May 02 j 17:50	6° Y 18'10 6° Y 18'10	0°28'28
minimum elong max. Earth dist.	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40	1° 光 26'38 1° 光 26'38 1° 光 25'56	0°47'11	conjunction minimum elong max. Earth dist.	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47	6°Υ18'10 6°Υ18'10 6°Υ14'43	
minimum elong max. Earth dist. retrograde	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13	1° \ 26'38 1° \ 26'38 1° \ 25'56 5° \ 36'34	0°47'11 20.46608 AU	conjunction minimum elong max. Earth dist. retrograde	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35	0°28'28 19.92073 AU
minimum elong max. Earth dist. retrograde opposition	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15	1°\£26'38 1°\£26'38 1°\£25'56 5°\£36'34 3°\£35'27	0°47'11 20.46608 AU 0°-51'-24	conjunction minimum elong max. Earth dist. retrograde opposition	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39	0°28'28 19.92073 AU 0°-29'-48
minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06	1°\£26'38 1°\£26'38 1°\£25'56 5°\£36'34 3°\£35'27 3°\£34'56	0°47'11 20.46608 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28	0°28'28 19.92073 AU
minimum elong max. Earth dist. retrograde opposition	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15	1°\£26'38 1°\£26'38 1°\£25'56 5°\£36'34 3°\£35'27	0°47'11 20.46608 AU 0°-51'-24	conjunction minimum elong max. Earth dist. retrograde opposition	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39	0°28'28 19.92073 AU 0°-29'-48
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52	1°\£26'38 1°\£25'56 5°\£36'34 3°\£35'27 3°\£35'05	0°47'11 20.46608 AU 0°-51'-24 18.43435 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52	1°\tau26'38 1°\tau25'56 5°\tau36'34 3°\tau35'27 3°\tau35'05	0°47'11 20.46608 AU 0°-51'-24 18.43435 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52 -4443 Mar 31 j 19:19	1°\tau26'38 1°\tau26'38 1°\tau25'56 5°\tau36'34 3°\tau35'27 3°\tau34'56 1°\tau35'05 5°\tau41'18 5°\tau41'18	0°45'-37 0°45'44	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38 -4435 May 07 j 16:54 -4435 May 07 j 16:54	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01 10°Y47'51 10°Y47'51	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU 0°-25'-8 0°25'07
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-4444 Mar 27 j 02:27 -4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52 -4443 Mar 31 j 19:19 -4443 Mar 31 j 19:19 -4443 Mar 31 j 13:06	1°\tau26'38 1°\tau26'38 1°\tau25'56 5°\tau36'34 3°\tau35'27 3°\tau34'56 1°\tau35'05 5°\tau41'18 5°\tau40'24	0°47'11 20.46608 AU 0°-51'-24 18.43435 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38 -4435 May 07 j 16:54 -4435 May 06 j 15:53	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01 10°Y47'51 10°Y47'51 10°Y44'05	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU 0°-25'-8
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52 -4443 Mar 31 j 19:19 -4443 Mar 31 j 13:06 -4443 Jul 20 j 14:48	1°\tau26'38 1°\tau26'38 1°\tau25'56 5°\tau36'34 3°\tau35'27 3°\tau34'56 1°\tau35'05 5°\tau41'18 5°\tau40'24 9°\tau52'04	0°47'11 20.46608 AU 0°-51'-24 18.43435 AU 0°-45'-37 0°45'44 20.40227 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38 -4435 May 07 j 16:54 -4435 May 06 j 15:53 -4435 Aug 25 j 07:37	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01 10°Y47'51 10°Y47'51 10°Y44'05 15°Y05'01	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU 0°-25'-8 0°25'07 19.85264 AU
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4444 Mar 27 j 02:27 -4444 Mar 26 j 21:40 -4444 Jul 15 j 23:13 -4444 Sep 29 j 12:15 -4444 Sep 29 j 17:06 -4444 Dec 13 j 02:52 -4443 Mar 31 j 19:19 -4443 Mar 31 j 13:06 -4443 Jul 20 j 14:48 -4443 Oct 03 j 22:02	1°\tau26'38 1°\tau26'38 1°\tau25'56 5°\tau36'34 3°\tau35'27 3°\tau34'56 1°\tau35'05 5°\tau41'18 5°\tau40'24 9°\tau52'04 7°\tau50'54	0°47'11 20.46608 AU 0°-51'-24 18.43435 AU 0°-45'-37 0°45'44 20.40227 AU 0°-49'-40	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4436 May 02 j 17:50 -4436 May 02 j 17:50 -4436 May 01 j 18:47 -4436 Aug 20 j 11:02 -4436 Nov 02 j 14:58 -4436 Nov 03 j 11:13 -4435 Jan 16 j 18:38 -4435 May 07 j 16:54 -4435 May 06 j 15:53 -4435 Aug 25 j 07:37 -4435 Nov 07 j 06:31	6°Y18'10 6°Y18'10 6°Y14'43 10°Y34'35 8°Y32'39 8°Y30'28 6°Y29'01 10°Y47'51 10°Y47'51 10°Y44'05 15°Y05'01 13°Y02'57	0°28'28 19.92073 AU 0°-29'-48 17.88648 AU 0°-25'-8 0°25'07 19.85264 AU 0°-26'-1
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Planetary Phenomena of Uranus from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:35, Attention, astronomical year style is used: The year -4432 in astronomical counting style is the year 4433 BCE in historical counting style. -4432 May 21 i 18:30 24°**Υ**27'20 0°-14'-13 conjunction -4426 Jun 20 j 11:16 22°**8**31'42 0°10'06 conjunction -4432 May 21 j 18:30 24°**Υ**27'20 minimum elong -4426 Jun 20 j 11:15 22°\(\mathbf{3}\)31'42 0°10'16 minimum elong 0°14'09 -4426 Jun 20 j 05:56 22°**8**30'53 -4432 May 21 j 15:25 24°**Υ**26'52 behind sun begin behind sun begin -4432 May 21 j 21:36 24°**Y**27'47 -4426 Jun 20 j 16:34 22°832'30 behind sun end behind sun end -4426 Oct 06 j 10:58 26°**8**54'02 -4432 May 20 j 14:20 24° Υ 23'02 19.66514 AU max. Earth dist. retrograde -4426 Dec 18 j 16:30 24°**8**51'54 0°13'27 -4432 Sep 07 j 19:36 28°**Y**46'35 retrograde opposition -4432 Nov 20 j 10:16 26°**Υ**44'20 min. Earth dist. opposition 0°-13'-39 -4426 Dec 19 j 20:13 24°848'53 17.37759 AU -4432 Nov 21 j 10:41 26°**Υ**41'40 17.63733 AU min. Earth dist. direct -4425 Mar 04 j 21:42 22°**8**45'38 -4431 Feb 03 j 21:50 24°**Υ**39'15 max. Earth dist. direct -4425 Jun 24 j 05:59 27°**8**11'47 19.36182 AU conjunction -4431 May 26 j 20:04 29°**Υ**'04'00 0°-10'-19 conjunction -4425 Jun 25 j 15:03 27°**8**16'58 0°14'08 -4431 May 26 j 20:04 29°**Υ**04'01 -4425 Jun 25 j 15:03 27°**8**16'58 minimum elong 0°10'15 minimum elong 0°14'17 -4431 May 26 j 14:45 29°**Υ**03'13 -4425 Jun 25 j 12:00 27°**8**16'30 behind sun begin behind sun begin behind sun end -4431 May 27 j 01:24 29°**Y**04'48 behind sun end -4425 Jun 25 j 18:05 27°**8**17'25 max. Earth dist. -4431 May 25 j 14:01 28°**Υ**59'24 19.61015 AU -4425 Aug 11 j 02:56 $0^{\circ}\Pi$ -4431 Jun 11 j 03:47 0°8 retrograde -4425 Oct 11 j 10:16 1°**Ⅲ**39'34 retrograde -4431 Sep 12 j 17:59 3°**8**23'56 -4425 Dec 15 j 00:17 30°R8 opposition -4431 Nov 25 j 05:06 1°**8**21'40 0°-9'-15 opposition -4425 Dec 23 j 16:17 29°**8**37'27 0°17'54 min. Earth dist. -4431 Nov 26 j 05:51 1°818'57 17.58445 AU min. Earth dist. -4425 Dec 24 j 20:35 29° \(\delta 34'22 \) 17.34809 AU -4431 Dec 29 j 05:18 30°R℃ direct -4424 Mar 08 j 23:47 27°**8**31'00 direct -4430 Feb 08 j 20:13 29°**Y**16′20 -4424 May 26 j 22:13 $0^{\circ}\Pi$ -4430 Mar 21 j 22:20 0°8 max. Earth dist. -4424 Jun 28 j 10:42 1°**Д**57'58 19.33457 AU conjunction -4430 May 31 j 22:19 3°**8**42'27 0°-6'-21 conjunction -4424 Jun 29 i 18:45 2°**Ⅱ**02'59 0°18'04 -4430 May 31 j 22:20 3°**8**42'27 0°06'15 minimum elong -4424 Jun 29 i 18:45 2°II02'59 0°18'15 minimum elong -4430 May 31 j 15:56 3°841'30 -4424 Oct 15 j 11:12 6°**Ⅲ**25'47 behind sun begin retrograde -4430 Jun 01 j 04:44 3°843'25 opposition -4424 Dec 27 j 16:35 4°II23'40 0°22'15 behind sun end -4430 May 30 j 16:34 3°**8**37'53 19.55920 AU -4424 Dec 28 j 20:03 4°**Д**20'40 17.32316 AU max. Earth dist. min. Earth dist. -4430 Sep 17 j 14:48 -4423 Mar 14 j 03:31 2°**Ⅱ**17'06 retrograde 8°802'58 direct -4430 Nov 30 j 00:57 6°800'45 0°-4'-46 opposition -4430 Dec 01 j 02:52 5°**8**57'55 17.53545 AU -4423 Jul 04 j 22:21 6°II49'35 0°21'53 min. Earth dist. conjunction -4429 Feb 13 j 17:38 -4423 Jul 04 j 22:21 6°II49'35 0°22'04 3°**8**55'12 minimum elong direct -4429 Jun 04 j 17:20 8°**8**17'42 19.51217 AU -4423 Jul 03 j 14:19 6°**Д**44'33 19.31218 AU max. Earth dist. max. Earth dist. -4423 Oct 20 j 10:31 11°**Ⅲ**12'30 retrograde 9°**Ⅱ**10'22 0°26'26 -4429 Jun 06 j 01:01 8°**8**22'36 0°-2'-17 -4422 Jan 01 j 17:21 conjunction opposition -4429 Jun 06 j 01:00 8°**8**22'36 0°02'10 -4422 Jan 02 j 21:12 9°**耳**07′20 17.30354 AU minimum elong min. Earth dist. -4429 Jun 05 j 18:14 8°**8**21'34 -4422 Mar 19 j 05:58 behind sun begin direct 7°**Ⅲ**03'41 behind sun end -4429 Jun 06 j 07:46 8°**8**23'37 max. Earth dist. -4422 Jul 08 j 18:50 11° ДЗ1'39 19.29535 AU retrograde -4429 Sep 22 j 13:33 12°**8**43'41 opposition -4429 Dec 04 j 21:34 10°**8**41'29 0°00'-13 conjunction -4422 Jul 10 j 01:46 11°**Д**36'32 0°25'33 min. Earth dist. -4429 Dec 06 j 00:01 10°\(\begin{aligned}
 38'35 17.49041 AU
 \end{aligned} minimum elong -4422 Jul 10 j 01:46 11°**Д**36'32 -4429 Dec 23 j 18:12 9°**8**53'19 -4422 Oct 25 j 11:51 15°**I**I59'29 asc. node retrograde -4428 Feb 18 j 17:51 8°835'44 -4421 Jan 06 j 18:36 13°**Д**57'22 0°30'27 direct opposition max. Earth dist. min. Earth dist. -4421 Jan 07 j 20:53 13°**Ц**54'31 17.28952 AU -4421 Mar 24 j 10:17 11°**Д**50'37 direct -4428 Jun 10 j 04:16 13°**8**04'19 0°01'55 -4421 Jul 13 j 23:05 16°**Д**18'58 19.28431 AU conjunction max. Earth dist. -4428 Jun 10 j 04:15 13°**8**04'19 minimum elong 0°02'03 -4428 Jun 09 j 21:29 13°**8**03'17 -4421 Jul 15 i 04:51 16°**Ⅲ**23'41 behind sun begin conjunction behind sun end -4428 Jun 10 j 11:01 13°**8**05'20 minimum elong -4421 Jul 15 i 04:51 16°**Ⅲ**23'41 0°29'16 -4428 Jul 12 j 06:04 15°8 retrograde -4421 Oct 30 j 11:26 20° **II**46'36 -4428 Sep 26 j 12:02 17°825'53 opposition -4420 Jan 11 j 20:25 18°**Д**44'31 0°34'15 retrograde -4428 Dec 08 j 19:12 15°**8**23'43 0°04'21 min. Earth dist. -4420 Jan 12 j 22:39 18°**Д**41'40 17.28172 AU opposition min. Earth dist. -4428 Dec 09 j 22:16 15°\(\begin{aligned}
 20'45 17.44899 AU
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 420'45 17.44899 AU
 4 direct -4420 Mar 28 j 13:16 16°**Ⅲ**37'44 -4420 Jul 18 j 03:01 21°**Ц**06'20 19.27984 AU -4428 Dec 17 j 21:36 15°R8 max. Earth dist. direct -4427 Feb 22 j 18:05 13°817'48 -4427 Apr 28 j 00:21 15°**8** conjunction -4420 Jul 19 j 07:33 21°**Д**10'51 0°32'21 -4427 Jun 13 j 22:45 17°**8**42'19 19.42933 AU max. Earth dist. minimum elong -4420 Jul 19 j 07:32 21°**I**I10'51 0°32'33 -4420 Nov 03 j 12:44 25°**Д**33'42 retrograde -4427 Jun 15 j 07:30 17°**8**47'24 0°06'02 -4419 Jan 15 j 22:30 23°**II**31'39 conjunction opposition 0°37'48 -4427 Jun 15 j 07:29 17°**8**47'24 0°06'12 -4419 Jan 16 j 22:23 23°**Ⅲ**29'04 17.28057 AU minimum elong min. Earth dist. -4427 Jun 15 j 01:05 17°**8**46'26 -4419 Apr 02 j 18:03 21°**Ⅲ**24'56 behind sun begin direct behind sun end -4427 Jun 15 j 13:53 17°**8**48'22 max. Earth dist. -4419 Jul 23 j 07:31 25°**Ⅲ**53'48 19.28206 AU retrograde -4427 Oct 01 j 11:04 22°809'25 opposition -4427 Dec 13 j 17:33 20°807'16 0°08'55 conjunction -4419 Jul 24 j 09:51 25°**Ⅲ**57'58 0°35'25 min. Earth dist. -4427 Dec 14 j 21:14 20°**8**04'14 17.41142 AU minimum elong -4419 Jul 24 j 09:51 25°**Ⅲ**57'58 0°35'38 -4426 Feb 27 j 19:27 18°801'09 -4419 Oct 12 j 10:47 direct 0ಂತಾ max. Earth dist. -4426 Jun 19 j 03:13 22°**8**26'42 19.39360 AU -4419 Nov 08 j 12:07 0°9520'41 retrograde

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opposition	-4418 Jan 21 j 01:00	28° Ⅱ 18'43	0°41'06	retrograde	-4411 Dec 16 j 07:48	8° Ω 16'39	
min. Earth dist.	-4418 Jan 22 j 00:27	28° Ⅱ 16′10	17.28622 AU	opposition	-4410 Mar 01 j 00:14	6° Ω 15'41	0°55'44
direct	-4418 Apr 07 j 21:33	26° Ⅱ 12'07		min. Earth dist.	-4410 Mar 01 j 08:58	6° Ω 14'46	17.53073 AU
	-4418 Jul 17 j 15:16	0ಂತ		direct	-4410 May 17 j 06:14	4° Ω 11'11	
max. Earth dist.	-4418 Jul 28 j 10:28	0°9540'56	19.29117 AU				
				conjunction	-4410 Sep 05 j 05:40		0°50'09
conjunction	-4418 Jul 29 j 11:44	0°9544'56	0°38'15	minimum elong	-4410 Sep 05 j 05:40	8° Ω 37'17	
minimum elong	-4418 Jul 29 j 11:43	0°544'56	0°38'27	max. Earth dist.	-4410 Sep 04 j 20:42		19.55430 AU
retrograde	-4418 Nov 13 j 12:55	5°907'27	0044107	retrograde	-4410 Dec 21 j 05:39	12° Ω 55'53 10° Ω 54'58	0055155
opposition min. Earth dist.	-4417 Jan 26 j 03:31 -4417 Jan 27 j 00:26	3°505'36	17.29858 AU	opposition min. Earth dist.	-4409 Mar 06 j 02:21 -4409 Mar 06 j 09:12		17.57902 AU
direct	-4417 Jan 27 j 00:20	0°959'10	17.29030 AU	direct	-4409 May 22 j 08:31	8° Ω 50'44	17.37902 AU
direct	4417 Apr 15 J 02.55	0 35710		direct	440) May 22 J 00.51	0 000	
conjunction	-4417 Aug 03 j 13:17	5° © 31'39	0°40'49	conjunction	-4409 Sep 10 j 01:26	13° Ω 15'28	0°50'10
minimum elong	-4417 Aug 03 j 13:17	5° © 31'39	0°41'02	minimum elong	-4409 Sep 10 j 01:26		0°50'20
max. Earth dist.	-4417 Aug 02 j 14:51	5°528'06	19.30677 AU	max. Earth dist.	-4409 Sep 09 j 19:33	13° Ω 14'32	19.60423 AU
retrograde	-4417 Nov 18 j 12:12	9° © 53'54			-4409 Oct 08 j 13:26	15° Ω	
opposition	-4416 Jan 31 j 06:35	7° © 52'12	0°46'50	retrograde	-4409 Dec 26 j 02:44		
min. Earth dist.	-4416 Feb 01 j 02:45	7° 9 50'02	17.31726 AU	opposition	-4408 Mar 10 j 04:01		
direct	-4416 Apr 17 j 07:20	5° ॐ 46'02		min. Earth dist.	-4408 Mar 10 j 08:11		17.63043 AU
					-4408 Mar 23 j 04:58		
conjunction	-4416 Aug 07 j 14:01	10°517'59		direct	-4408 May 26 j 11:04		
minimum elong	-4416 Aug 07 j 14:01	10°517'59	0°43'19		-4408 Jul 26 j 01:05	15°81	
max. Earth dist.	-4416 Aug 06 j 16:36		19.32852 AU		4400 C 12: 20.00	170 051145	0940151
retrograde opposition	-4416 Nov 22 j 12:22 -4415 Feb 04 j 09:36	14° © 39'56 12° © 38'23	0°49'13	conjunction minimum elong	-4408 Sep 13 j 20:00 -4408 Sep 13 j 20:00		0°49'51 0°49'59
min. Earth dist.	-4415 Feb 05 j 03:13		17.34179 AU	max. Earth dist.	-4408 Sep 13 j 16:04		
direct	-4415 Apr 22 j 12:38		17.54177710	retrograde	-4408 Dec 29 j 22:29		17.03727710
		10 03227		opposition	-4407 Mar 15 j 05:09		0°55'11
conjunction	-4415 Aug 12 j 14:29	15° © 03'47	0°45'06	min. Earth dist.	-4407 Mar 15 j 07:31		
minimum elong	-4415 Aug 12 j 14:29		0°45'18	direct	-4407 May 31 j 11:43		
max. Earth dist.	-4415 Aug 11 j 20:09		19.35568 AU		•		
retrograde	-4415 Nov 27 j 11:24	19° © 25'20		conjunction	-4407 Sep 18 j 13:51	22° Ω 26′07	0°49'13
opposition	-4414 Feb 09 j 12:40	17° 5 23'57	0°51'15	minimum elong	-4407 Sep 18 j 13:51	22° Ω 26′07	0°49'22
min. Earth dist.	-4414 Feb 10 j 05:21	17° © 22'10	17.37139 AU	max. Earth dist.	-4407 Sep 18 j 12:53		19.71376 AU
direct	-4414 Apr 27 j 16:40	15° © 18'18		retrograde	-4406 Jan 03 j 18:35		
				opposition	-4406 Mar 20 j 05:26		
conjunction	-4414 Aug 17 j 14:12		0°46'46	min. Earth dist.	-4406 Mar 20 j 04:39		17.74325 AU
minimum elong	-4414 Aug 17 j 14:12		0°46'59 19.38769 AU	direct	-4406 Jun 05 j 12:57	22° 31 38'21	
max. Earth dist.	-4414 Aug 16 j 20:42 -4414 Dec 02 j 11:23	19°546'04 24°509'56	19.38/09 AU	agniumation	-4406 Sep 23 j 06:43	260 050122	0°48'18
retrograde opposition	-4413 Feb 14 j 15:48		0°52'56	conjunction minimum elong	-4406 Sep 23 j 06:43		0°48'24
min. Earth dist.	-4413 Feb 15 j 06:08	22°507'09	17.40563 AU	max. Earth dist.	-4406 Sep 23 j 08:05		
direct	-4413 May 02 j 21:03		17.10005110	man. Bartir digt.	-4406 Nov 16 j 03:29	0°m)	19.77500110
	, . ,			retrograde	-4405 Jan 08 j 12:32	1° mp 14'03	
conjunction	-4413 Aug 22 j 13:17	24° © 32'56	0°48'07		-4405 Mar 06 j 00:02	30°R€	
minimum elong	-4413 Aug 22 j 13:17	24°932'56	0°48'18	opposition	-4405 Mar 25 j 05:26	29° Ω 13'19	0°53'05
max. Earth dist.	-4413 Aug 21 j 22:57		19.42396 AU	min. Earth dist.	-4405 Mar 25 j 02:55		17.80473 AU
retrograde	-4413 Dec 07 j 10:11	28° © 53'29		direct	-4405 Jun 10 j 11:32	27° Ω 10′28	
opposition	-4412 Feb 19 j 18:58		0°54'15		-4405 Sep 03 j 12:38	0° ™	
min. Earth dist.	-4412 Feb 20 j 07:48		17.44377 AU				
direct	-4412 May 07 j 00:15	47'17في 24°		conjunction	-4405 Sep 27 j 22:38	1° Tp 29'06	0°47'05
agniumation	4412 4 26: 11:24	2006215150	0.040100	minimum elong	-4405 Sep 27 j 22:39	1° Tp 29'06	0°47'11
conjunction minimum elong	-4412 Aug 26 j 11:34 -4412 Aug 26 j 11:34	29° © 15'50	0°49'08 0°49'20	max. Earth dist. retrograde	-4405 Sep 28 j 02:47 -4404 Jan 13 j 08:02	1° To 29'45 5° To 43'50	19.83663 AU
max. Earth dist.	-4412 Aug 25 j 22:13		19.46403 AU	opposition	-4404 Mar 29 j 04:41	3° Mp 43'12	0°51'34
max. Dartii dist.	-4412 Sep 07 j 04:05	0°Ω	17.10103710	min. Earth dist.	-4404 Mar 28 j 22:41	-	17.86923 AU
retrograde	-4412 Dec 11 j 09:37	3° Ω 35'48		direct	-4404 Jun 14 j 11:08	1° Mp 40'47	
opposition	-4411 Feb 23 j 21:44	1° Ω 34'45	0°55'11		<i>j</i>	n	
min. Earth dist.	-4411 Feb 24 j 08:28		17.48568 AU	conjunction	-4404 Oct 01 j 13:49	5° m 57'51	0°45'35
	-4411 Apr 07 j 07:39	30°Rூ		minimum elong	-4404 Oct 01 j 13:50	5° m 57'51	0°45'41
direct	-4411 May 12 j 03:30	29° 5 29'57		max. Earth dist.	-4404 Oct 01 j 20:32	5° m 58′53	19.90247 AU
		00.0		ratrograda	4402 Ion 17:00:24	10° m 11'49	
	-4411 Jun 15 j 04:07	$0 {\circ} \Omega$		retrograde	-4403 Jan 17 j 00:34	-	
	-			opposition	-4403 Apr 03 j 03:14	8° m 11'19	0°49'44
conjunction minimum elong	-4411 Jun 15 j 04:07 -4411 Aug 31 j 09:07 -4411 Aug 31 j 09:07	3°Ω57'21 3°Ω57'21	0°49'48 0°49'59		-	8° m 11'19	0°49'44 17.93631 AU

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Attention, astronomical year style is used: The year -4403 in astronomical counting style is the year 4404 BCE in historical counting style.

conjunction	-4403 Oct 0	06 i 04:11	10° m) 24'51	0°43'49
minimum elong	-4403 Oct 0	-	10° m 24'51	0°43'54
max. Earth dist.	-4403 Oct 0	5	10° m) 26'13	19.97059 AU
retrograde	-4402 Jan 2	5	14° m 38'03	
opposition	-4402 Apr 0	5	12° m 37'42	0°47'37
min. Earth dist.	-4402 Apr 0		12° m/38'48	18.00511 AU
direct	-4402 Jun 2		10° m 36'12	
		J		
conjunction	-4402 Oct 1	10 j 17:43	14° m 50'08	0°41'49
minimum elong	-4402 Oct 1	10 j 17:43	14° m 50'08	0°41'54
max. Earth dist.	-4402 Oct 1	11 j 05:14	14° m 51'54	20.03995 AU
retrograde	-4401 Jan 2	26 j 10:22	19° Mp 02'35	
opposition	-4401 Apr 1	12 j 22:30	17° Mp 02'23	0°45'13
min. Earth dist.	-4401 Apr 1	12 j 10:46	17° m 03'35	18.07494 AU
direct	-4401 Jun 2	28 j 23:44	15° m 01'21	
conjunction	-4401 Oct 1	15 j 06:34	19° m 13'43	0°39'34
minimum elong	-4401 Oct 1	15 j 06:34	19° m 13'43	0°39'37
max. Earth dist.	-4401 Oct 1	15 j 19:48	19° m 15'44	20.11006 AU
retrograde	-4400 Jan 3	31 j 03:56	23°m/25'24	
opposition	-4400 Apr 1	l6 j 19:01	21°M)25'21	0°42'35
min. Earth dist.	-4400 Apr 1	16 j 04:15	21°M)26'51	18.14506 AU
direct	-4400 Jul 0	02 j 19:02	19° m 24'46	
conjunction	-4400 Oct 1	18 j 18:44	23°m/35'34	0°37'06
minimum elong	-4400 Oct 1	18 j 18:44	23°M 35'34	0°37'08

 $\hbox{-}4400 \ {\rm Oct} \ \ 19 \ j \ 10.25 \ \ 23^\circ \ \hbox{My} \ 37^{\prime} 57 \ \ 20.17992 \ {\rm AU}$

max. Earth dist.

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style. -4400 Jan 31 j 03:56 23° m 25'24 minimum elong -4393 Nov 17 j 12:51 23°**£**17'32 0°15'24 retrograde -4400 Apr 16 j 19:01 21° m 25'21 0°42'35 -4393 Nov 17 j 10:40 23°**△**17'13 opposition behind sun begin min. Earth dist. -4400 Apr 16 j 04:15 21° m 26'51 18.14506 AU -4393 Nov 17 j 15:02 23°**2**17'51 behind sun end -4393 Nov 18 j 14:20 23°**≙**21'18 20.62438 AU -4400 Jul 02 j 19:02 19° m 24'46 max. Earth dist. direct -4392 Mar 05 j 15:32 27°**£**23'22 retrograde -4400 Oct 18 j 18:44 23° m 35'34 0°37'06 conjunction min. Earth dist. -4392 May 21 j 08:28 25°**£**26'15 18.65306 AU -4400 Oct 18 j 18:44 23° m 35'34 0°37'08 minimum elong opposition -4392 May 22 j 10:44 25°**£**23'37 0°15'08 -4400 Oct 19 j 10:25 23° m 37'57 20.17992 AU max. Earth dist. direct -4392 Aug 06 j 18:35 23°**£**25'39 retrograde -4399 Feb 03 j 18:11 27° m/46'30 opposition -4399 Apr 21 j 14:56 25° m 46'34 0°39'42 conjunction -4392 Nov 20 j 19:57 27°**£**24'59 0°12'00 min. Earth dist. -4399 Apr 20 j 23:27 25° Mp 48'08 18.21461 AU minimum elong -4392 Nov 20 j 19:58 27°**£**24'59 0°11'55 -4399 Jul 07 j 12:12 23° Mp 46'25 -4392 Nov 20 j 15:21 27°**2**24'19 direct behind sun begin -4392 Nov 21 j 00:34 27°**£**25'38 behind sun end conjunction -4399 Oct 23 j 06:12 27° m 55'40 0°34'26 max. Earth dist. -4392 Nov 21 j 23:41 27°**Ω**29'04 20.68082 AU minimum elong -4399 Oct 23 j 06:12 27° m 55'40 0°34'27 -4391 Jan 07 j 05:58 0°M max. Earth dist. -4399 Oct 23 j 22:58 27° m 58'12 20.24892 AU retrograde -4391 Mar 10 j 00:59 1°M30'12 -4399 Nov 27 j 23:17 0∘**⊽** -4391 May 14 j 15:02 30°R **≏** retrograde -4398 Feb 08 j 10:22 2°**2**05'50 opposition -4391 May 26 j 23:58 29°**2**30'29 0°11'16 opposition -4398 Apr 26 j 09:51 0°**2**06'00 0°36'38 min. Earth dist. -4391 May 25 j 21:06 29° **2**33'11 18.70864 AU min. Earth dist. -4398 Apr 25 j 15:45 0°**£**07'51 18.28291 AU direct -4391 Aug 11 j 05:30 27° **△**32'49 -4398 Apr 28 j 21:00 30°R M -4391 Oct 29 j 15:50 direct -4398 Jul 12 i 05:20 28° m 06'15 -4398 Sep 18 j 16:58 0∘**⊽** conjunction -4391 Nov 25 i 02:27 1°M30'59 0°08'30 minimum elong -4391 Nov 25 i 02:27 1°MJ30'59 0°08'24 conjunction -4398 Oct 27 j 17:04 2°**2**13'58 0°31'35 behind sun begin -4391 Nov 24 j 20:41 1°MJ30'09 -4398 Oct 27 j 17:05 2°**2**13'58 0°31'35 -4391 Nov 25 j 08:13 1°ML31'48 minimum elong behind sun end -4398 Oct 28 j 12:06 2°**2**16'50 20.31634 AU -4391 Nov 26 j 06:23 1°M35'05 20.73550 AU max Earth dist max Earth dist -4397 Feb 12 j 23:38 6°**£**23′23 -4390 Mar 14 j 12:24 5°M235'40 retrograde retrograde -4397 Apr 30 j 09:35 4°**2**25'31 18.34944 AU -4390 May 30 j 08:08 min. Earth dist. min. Earth dist. 3°MJ38'50 18.76235 AU -4397 May 01 j 04:17 4°**£**23'37 -4390 May 31 j 12:27 3°M36'00 0°07'21 0°33'22 opposition opposition -4397 Jul 16 j 21:23 -4390 Aug 15 j 16:01 direct 2°**£**24'14 direct 1°M38'36 -4397 Nov 01 j 03:05 -4390 Nov 29 j 08:48 5°M35'43 0°04'59 conjunction 6°**2**30'26 0°28'35 conjunction 5°M35'43 -4397 Nov 01 j 03:06 -4390 Nov 29 j 08:48 minimum elong 6°**2**30'26 0°28'35 minimum elong 0°04'53 -4397 Nov 01 j 22:53 6°**2**33'24 20.38193 AU -4390 Nov 29 j 02:25 max. Earth dist. behind sun begin 5°M34'49 -4396 Feb 17 j 14:51 10°**2**39'06 -4390 Nov 29 j 15:11 retrograde behind sun end 5°M36'38 -4390 Nov 30 j 14:45 opposition -4396 May 04 j 21:43 8°**△**39'21 0°29'57 max. Earth dist. 5°M40'06 20.78800 AU min. Earth dist. -4396 May 04 j 00:40 8°**2**41'29 18.41398 AU retrograde -4389 Mar 18 j 21:31 9°M39'54 direct -4396 Jul 20 j 12:44 6°**£**40'18 min. Earth dist. -4389 Jun 03 j 19:38 7°ML43'11 18.81361 AU opposition -4389 Jun 05 j 00:20 7°M40'18 0°03'26 conjunction -4396 Nov 04 j 12:37 10°**•**45'00 0°25'27 direct -4389 Aug 20 j 01:22 5°M43'13 -4396 Nov 04 j 12:37 10°**£**45'00 0°25'25 minimum elong max. Earth dist. -4396 Nov 05 j 10:37 10°**2**48'18 20.44532 AU -4389 Dec 03 j 14:40 9°M39'20 0°01'25 conjunction -4395 Feb 21 j 02:25 14°**£**52'54 -4389 Dec 03 j 14:40 9°**™**39′20 retrograde minimum elong 0°01'17 -4395 May 09 j 14:11 12°**♀**53'11 0°26'23 -4389 Dec 03 j 08:08 9°M38'25 opposition behind sun begin -4389 Dec 03 j 21:13 min. Earth dist. -4395 May 08 i 16:39 12° **2**55'21 18.47635 AU behind sun end 9°M40'16 -4395 Jul 25 j 03:31 10°**£**54'25 direct max. Earth dist. -4389 Dec 04 i 20:28 9°M43'41 20.83794 AU retrograde -4388 Mar 22 j 08:02 13°ML43'05 -4395 Nov 08 j 21:18 14°**£**57'40 0°22'12 conjunction desc. node -4388 Apr 23 i 07:34 13°ML19'10 -4395 Nov 08 i 21:19 14° \(\Omega\) 57'41 0°22'10 min. Earth dist. -4388 Jun 07 i 06:01 11°ML46'31 18.86205 AU minimum elong max. Earth dist. -4395 Nov 09 j 19:53 15°**2**01'03 20.50675 AU opposition -4388 Jun 08 j 11:34 11°ML43'34 0°00'-29 -4394 Feb 25 i 16:30 19° **2**04'51 direct -4388 Aug 23 j 10:12 9°M46'44 retrograde -4394 May 13 j 06:10 17° **2**07'30 18.53689 AU min. Earth dist. opposition -4394 May 14 j 05:51 17°**♀**05'06 0°22'43 conjunction -4388 Dec 06 j 20:35 13°ML42'00 0°-2'-13 direct -4394 Jul 29 j 17:22 15°**♀**06'37 minimum elong -4388 Dec 06 j 20:36 13°ML42'00 0°02'22 behind sun begin -4388 Dec 06 j 14:02 13°M41'04 conjunction -4394 Nov 13 j 05:20 19°**♀**08'29 0°18'52 behind sun end -4388 Dec 07 j 03:09 13°ML42'55 -4394 Nov 13 j 05:20 19°**೨**08'29 0°18'48 -4388 Dec 08 j 03:56 13°ML46'33 20.88455 AU minimum elong max. Earth dist. -4394 Nov 14 j 06:19 19°**£**12'11 20.56631 AU -4388 Dec 29 j 14:26 15°M max. Earth dist. -4393 Mar 02 j 02:46 23°**♀**14'58 -4387 Mar 26 j 17:00 17° ML45'20 retrograde retrograde -4393 May 18 j 20:48 21°**2**15'13 0°18'58 opposition opposition -4387 Jun 12 j 22:03 15°M 45'54 0°-4'-24 min. Earth dist. -4393 May 17 j 20:25 21°**2**17'40 18.59568 AU min. Earth dist. -4387 Jun 11 j 16:32 15°ML48'51 18.90681 AU direct -4393 Aug 03 j 06:22 19°**£**17'00 -4387 Jul 02 j 13:32 15°RML direct -4387 Aug 27 j 18:29 13°M-49'20 conjunction -4393 Nov 17 j 12:51 23°**2**17'32 0°15'28 -4387 Oct 20 j 03:36 15°M

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4387 in astronomical counting style is the year 4388 BCE in historical counting style. -4387 Dec 11 j 02:13 17° ML 43'48 0°-5'-45 max. Earth dist. -4379 Jan 08 i 21:43 15° ₹ 41'51 21.08868 AU conjunction -4387 Dec 11 j 02:12 17° ML43'48 0°05'55 -4379 Apr 28 j 10:38 19° ₹39'19 minimum elong retrograde behind sun begin -4387 Dec 10 j 19:56 17° ML42'55 opposition -4379 Jul 15 j 16:28 17° **₹** 39'46 0°-32'-56 -4387 Dec 11 j 08:28 17° ML44'41 -4379 Jul 14 j 13:57 17° ₹ 42'26 19.09201 AU behind sun end min. Earth dist. -4387 Dec 12 j 08:49 17°ML48'14 20.92737 AU -4379 Sep 28 j 21:11 15° **₹** 43'46 max. Earth dist. direct retrograde -4386 Mar 31 j 02:34 21°M-46'48 -4378 Jan 11 j 21:45 19° ₹ 34'53 0°-31'-9 min. Earth dist. -4386 Jun 16 j 02:24 19°ML50'24 18.94755 AU conjunction 0°-8'-16 -4378 Jan 11 j 21:44 19°**x** 34'53 0°31'21 opposition -4386 Jun 17 j 08:11 19°ML47'26 minimum elong -4378 Jan 13 j 01:33 19°■38'51 21.09352 AU direct -4386 Sep 01 j 01:55 17° ML51'04 max. Earth dist. -4378 May 02 j 18:46 23° ₹36'34 retrograde conjunction -4386 Dec 15 j 07:45 21°ML44'50 0°-9'-13 opposition -4378 Jul 19 j 22:56 21° **₹**'36'58 0°-35'-55 -4386 Dec 15 j 07:45 21°M.44'50 -4378 Jul 18 j 21:17 21° ₹ 39'33 19.09504 AU minimum elong 0°09'23 min. Earth dist. -4386 Dec 15 j 02:13 21°ML44'04 -4378 Oct 03 j 00:50 19° ₹ 40'55 behind sun begin direct behind sun end -4386 Dec 15 j 13:17 21°M45'37 max. Earth dist. -4386 Dec 16 j 15:30 21°ML49'26 20.96569 AU conjunction -4377 Jan 16 j 03:31 23°**х** 32'03 0°-33'-47 retrograde -4385 Apr 04 j 11:26 25°M47'32 minimum elong -4377 Jan 16 j 03:31 23°**尽** 32'03 0°34'00 opposition -4385 Jun 21 j 17:47 23°ML48'13 0°-12'-6 max. Earth dist. -4377 Jan 17 j 07:47 23°**х** 36'04 21.09463 AU min. Earth dist. -4385 Jun 20 j 12:17 23°ML51'10 18.98342 AU retrograde -4377 May 07 j 02:05 27° ₹33'48 direct -4385 Sep 05 j 09:41 21°M 52'03 min. Earth dist. -4377 Jul 23 j 03:58 25° ₹36'42 19.09423 AU opposition -4377 Jul 24 j 05:04 25° ₹34'10 0°-38'-45 conjunction -4385 Dec 19 j 13:17 25°ML45'11 0°-12'-38 direct -4377 Oct 07 j 05:57 23° ₹38'05 minimum elong -4385 Dec 19 j 13:17 25°M-45'11 0°12'49 behind sun begin -4385 Dec 19 i 09:08 25° ML44'36 conjunction -4376 Jan 20 i 09:33 27° ₹29'19 0°-36'-15 behind sun end -4385 Dec 19 i 17:25 25°ML45'46 minimum elong -4376 Jan 20 j 09:33 27°**尽** 29'19 0°36'28 max. Earth dist. -4385 Dec 20 j 19:45 25°ML49'35 20.99904 AU max. Earth dist. -4376 Jan 21 j 11:50 27° ₹33'03 21.09202 AU -4384 Apr 07 j 20:18 29° ML47'37 -4376 Mar 08 j 00:46 0°₹ retrograde -4384 Jun 23 j 21:35 27° ML51'14 19.01418 AU -4376 May 10 j 10:16 1°る31'12 min. Earth dist. retrograde opposition -4384 Jun 25 j 02:45 27°M-48'19 0°-15'-51 -4376 Jul 15 j 14:28 30°R **✓** -4384 Sep 08 j 16:03 25°M52'15 min. Earth dist. -4376 Jul 26 j 11:09 29° ₹33'57 19.08974 AU direct -4376 Jul 27 j 10:57 29° ₹31'33 0°-41'-23 opposition -4376 Oct 10 j 09:05 27° ₹35'24 -4384 Dec 22 j 18:51 29°ML44'52 0°-15'-59 conjunction direct -4384 Dec 22 j 18:52 29°M44'52 0°16'10 -4376 Dec 28 j 14:58 0°ರ minimum elong -4384 Dec 24 j 01:59 29°ML49'20 21.02699 AU max. Earth dist. -4375 Jan 23 j 16:03 -4384 Dec 27 j 04:09 1°る26'52 0°-38'-34 0°**√** conjunction -4383 Apr 12 j 04:17 3°**∡**¹47′03 -4375 Jan 23 j 16:03 1°る26'52 0°38'47 retrograde minimum elong -4383 Jun 28 j 06:33 -4375 Jan 24 j 18:25 1°る30'36 21.08551 AU min. Earth dist. 1°**≯**50'37 19.03937 AU max. Earth dist. 1°**∡**747'44 0°-19'-31 -4383 Jun 29 j 11:15 -4375 May 14 j 18:19 5°**る**28'55 opposition retrograde -4383 Aug 25 j 20:04 30°RM opposition -4375 Jul 31 j 16:47 3°**ප**29'16 0°-43'-50 direct -4383 Sep 12 j 23:12 29°M51'46 min. Earth dist. -4375 Jul 30 j 17:46 3°る31'36 19.08115 AU -4383 Sep 30 j 18:58 0°**∡**¹ direct -4375 Oct 14 j 13:52 1°る33'05 -4383 Dec 27 j 00:04 3°**∡**143'53 0°-19'-15 -4374 Jan 27 j 22:39 5°る24'50 0°-40'-41 conjunction conjunction -4383 Dec 27 j 00:04 3°**х** 43′53 0°19′26 -4374 Jan 27 j 22:39 5°る24'50 0°40'55 minimum elong minimum elong -4383 Dec 28 j 05:44 3°**₹**48'08 21.04958 AU max. Earth dist. -4374 Jan 28 j 22:45 5°る28'15 21.07493 AU max. Earth dist. -4382 Apr 16 j 12:49 7°**х** 45′53 -4374 May 19 j 03:07 9°る27'10 retrograde retrograde -4382 Jul 03 i 19:20 5°**х** 46'31 0°-23'-4 7°**ට**27'30 0°-46'-5 opposition opposition -4374 Aug 04 j 22:40 5°**∡**′49'20 19.05941 AU 7°る29'40 19.06841 AU min. Earth dist. -4382 Jul 02 i 15:10 min. Earth dist. -4374 Aug 04 i 01:18 direct -4382 Sep 17 j 04:51 3°**х** 50′34 direct -4374 Oct 18 i 17:31 5°る31'13 -4382 Dec 31 j 05:29 7°**₹**42'18 0°-22'-25 -4373 Feb 01 i 06:07 9°**ට**23'23 0°-42'-38 conjunction conjunction -4382 Dec 31 i 05:29 7°**∡**¹42'18 0°22'37 -4373 Feb 01 i 06:06 9°**ට**23'23 0°42'51 minimum elong minimum elong -4381 Jan 01 j 11:51 7°**∡**′46'38 21.06709 AU max. Earth dist. -4373 Feb 02 j 05:53 9°る26'46 21.05987 AU max Earth dist retrograde -4381 Apr 20 j 19:42 11°**≯** 44'08 -4373 May 23 j 11:50 13°る26'00 retrograde -4381 Jul 06 j 23:06 9°**∡**47'29 19.07453 AU -4373 Aug 08 j 08:08 11°る28'23 19.05090 AU min. Earth dist. min. Earth dist. opposition -4381 Jul 08 j 02:48 9°**∡**¹44'42 0°-26'-30 opposition -4373 Aug 09 j 04:20 11°**♂**26'20 0°-48'-8 direct -4381 Sep 21 j 11:04 7°**∡**¹48'45 direct -4373 Oct 22 j 21:59 9°₹29'58 -4380 Jan 04 j 10:46 11° **₹** 40'11 0°-25'-27 -4372 Feb 05 j 14:02 13°중22'37 0°-44'-22 conjunction conjunction -4380 Jan 04 j 10:46 11°**尽** 40'11 -4372 Feb 05 j 14:02 13°₹322'37 0°44'36 minimum elong 0°25'40 minimum elong -4380 Jan 05 j 15:37 11° ₹ 44'18 21.08003 AU -4372 Feb 06 j 10:53 13°₹25'35 21.03994 AU max. Earth dist. max. Earth dist. -4380 Apr 24 j 04:08 15° ₹ 41'54 retrograde retrograde -4372 May 26 j 21:18 17°る25'35 min. Earth dist. -4380 Jul 10 j 06:57 13° ₹ 45'06 19.08535 AU opposition -4372 Aug 12 j 10:14 15°₹25'52 0°-49'-56 opposition -4380 Jul 11 j 09:55 13°**х** 42'24 0°-29'-47 min. Earth dist. -4372 Aug 11 j 16:11 15°る27'42 19.02838 AU direct -4380 Sep 24 j 15:47 11° ₹ 46'25 direct -4372 Oct 26 j 02:26 13°る29'20 -4379 Jan 07 j 16:16 15° ₹ 37'40 0°-28'-22 -4371 Feb 08 j 22:34 17° **පි**22'35 0°-45'-54 conjunction conjunction

-4371 Feb 08 j 22:34 17°**♂**22'35

minimum elong

0°46'07

-4379 Jan 07 j 16:16 15° ₹ 37'40 0°28'36

minimum elong

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4371 in astronomical counting style is the year 4372 BCE in historical counting style. -4371 Feb 09 j 18:37 17°る25'26 21.01466 AU conjunction -4363 Mar 14 i 15:31 19°≈54'09 0°-49'-35 max. Earth dist. minimum elong -4371 May 31 j 06:33 21°る25'54 -4363 Mar 14 j 15:31 19°≈54'09 0°49'44 retrograde -4371 Aug 16 j 16:06 19°**♂**26'08 0°-51'-31 -4363 Mar 14 j 18:56 19°≈54'39 20.65286 AU opposition max. Earth dist. -4363 Jul 03 j 20:01 24°**≈**01'49 -4371 Aug 15 j 23:23 19°る27'51 19.00031 AU min. Earth dist. retrograde -4371 Oct 30 j 07:27 17°る29'25 -4363 Sep 17 j 21:14 22°≈01'02 0°-54'-34 direct opposition -4363 Sep 17 j 19:05 22°≈01'15 18.62425 AU min. Earth dist. -4370 Feb 13 j 07:33 21°**⋜**23'18 0°-47'-12 -4363 Dec 01 j 10:34 20°≈01'47 conjunction direct -4370 Feb 13 j 07:33 21°**궁**23'18 0°47'26 minimum elong -4370 Feb 14 j 00:23 21°る25'41 20.98399 AU -4362 Mar 19 j 05:42 24°≈03'42 0°-48'-54 max. Earth dist. conjunction -4362 Mar 19 j 05:42 24°≈03'42 0°49'03 retrograde -4370 Jun 04 j 16:05 25°る27'02 minimum elong opposition -4370 Aug 20 j 22:11 23°る27'09 0°-52'-50 max. Earth dist. -4362 Mar 19 j 05:50 24°≈03'43 20.59509 AU -4370 Aug 20 j 07:51 23°る28'37 18.96698 AU -4362 Jul 08 j 08:08 28°≈12'07 min. Earth dist. retrograde -4370 Nov 03 j 12:21 21°♂30'11 -4362 Sep 22 j 05:25 26°≈11'15 0°-53'-41 direct opposition min. Earth dist. -4362 Sep 22 j 05:55 26°≈11'12 18.56566 AU conjunction -4369 Feb 17 j 17:13 25°**궁**24'47 0°-48'-17 direct -4362 Dec 05 j 18:15 24°≈11'40 minimum elong -4369 Feb 17 j 17:13 25°**ට**24'47 0°48'30 max. Earth dist. -4369 Feb 18 j 09:06 25°る27'02 20.94808 AU conjunction -4361 Mar 23 j 20:58 28°≈14'59 0°-47'-58 retrograde -4369 Jun 09 j 02:06 29°る28'56 minimum elong -4361 Mar 23 j 20:58 28°≈14'59 0°48'06 opposition -4369 Aug 25 j 04:16 27°₹28'56 0°-53'-54 max. Earth dist. -4361 Mar 23 j 19:53 28°≈14'49 20.53566 AU min. Earth dist. -4369 Aug 24 j 15:19 27°る30'16 18.92847 AU -4361 Apr 23 j 23:26 0°**∀** direct -4369 Nov 07 j 18:34 25°る31'41 retrograde -4361 Jul 12 j 21:59 2°\ 24'09 opposition -4361 Sep 26 i 14:03 0°**)** 23'15 0°-52'-31 conjunction -4368 Feb 22 i 03:21 29°₹27'04 0°-49'-7 min. Earth dist. -4361 Sep 26 i 15:42 0° **★**23'04 18.50522 AU minimum elong -4368 Feb 22 i 03:21 29°る27'04 0°49'19 -4361 Oct 05 i 19:58 30°R≈ max. Earth dist. -4368 Feb 22 i 15:56 29°る28'52 20.90734 AU direct -4361 Dec 10 i 03:58 28°≈23'22 -4368 Mar 02 j 18:48 -4360 Feb 11 j 04:03 0°₩ 0°≈≈ -4368 Jun 12 j 11:29 3°≈31'42 retrograde -4368 Aug 28 j 10:27 1°≈31'33 0°-54'-42 -4360 Mar 27 j 12:57 2°\ 28'06 0°-46'-45 opposition conjunction min. Earth dist. -4368 Aug 28 j 00:00 1°≈32'38 18.88556 AU -4360 Mar 27 j 12:57 2°**¥**28'06 0°46'53 minimum elong -4360 Mar 27 j 08:27 -4368 Oct 09 j 19:46 30°R ₹ 2°**升**27′27 20.47431 AU max. Earth dist. -4368 Nov 10 j 23:28 29°る33'58 -4360 Jul 16 j 11:14 direct retrograde 6°**₩**38'05 -4368 Dec 12 j 18:37 -4360 Sep 29 j 23:22 4°**)** € 37'07 0°-51'-3 opposition -4360 Sep 30 j 03:56 min. Earth dist. 4°**₭**36'38 18.44296 AU -4360 Dec 13 j 13:26 -4367 Feb 25 j 14:10 3°≈30'15 0°-49'-43 2°\;36'54 conjunction direct -4367 Feb 25 j 14:10 minimum elong 3°≈30'15 0°49'55 -4359 Apr 01 j 05:59 6°\(\)43'08 0°-45'-17 -4367 Feb 26 j 01:51 max. Earth dist. 3°≈31'55 20.86242 AU conjunction -4367 Jun 16 j 22:32 -4359 Apr 01 j 05:59 6°**)** 43′08 0°45′23 retrograde 7°**≈**35'22 minimum elong -4359 Mar 31 j 23:58 opposition -4367 Sep 01 j 16:48 5°≈35'05 0°-55'-14 max. Earth dist. 6°**)** 42'16 20.41107 AU min. Earth dist. -4367 Sep 01 j 07:33 5°≈36'02 18.83875 AU retrograde -4359 Jul 21 j 02:08 10° **∺** 53'56 direct -4367 Nov 15 j 06:35 3°≈37'10 opposition -4359 Oct 04 j 09:14 8° **¥**52'54 0°-49'-17 min. Earth dist. -4359 Oct 04 j 15:01 8°**升**52'17 18.37864 AU -4366 Mar 02 j 01:16 7°≈34'23 0°-50'-3 -4359 Dec 18 j 00:50 6°**¥**52'21 conjunction direct -4366 Mar 02 j 01:16 7°≈34'23 0°50'14 minimum elong max. Earth dist. -4366 Mar 02 j 09:49 7°≈35'37 20.81401 AU -4358 Apr 05 j 23:43 11° **¥** 00'05 0°-43'-33 conjunction -4366 Jun 21 j 08:16 11°≈40'06 -4358 Apr 05 j 23:43 11°**米**00'05 0°43'39 retrograde minimum elong -4366 Sep 05 j 23:30 -4358 Apr 05 j 14:13 10° **)** 58'41 20.34567 AU opposition 9°≈39'39 0°-55'-29 max. Earth dist. -4358 Jul 25 j 16:23 15° ¥ 11'43 min. Earth dist. -4366 Sep 05 i 16:43 9°≈40'21 18.78882 AU retrograde -4366 Nov 19 j 11:49 -4358 Oct 08 i 19:59 13°¥ 10'35 0°-47'-14 direct 7°≈41'23 opposition min. Earth dist. -4358 Oct 09 i 04:52 13°¥09'38 18.31221 AU -4365 Mar 06 j 13:25 11°≈39'40 0°-50'-9 direct -4358 Dec 22 j 12:20 11° ¥ 09'38 conjunction -4365 Mar 06 i 13:25 11°≈39'40 0°50'20 minimum elong max. Earth dist. -4365 Mar 06 j 21:03 11°≈40'45 20.76266 AU -4357 Apr 10 j 18:36 15° **¥** 18'55 0°-41'-33 conjunction -4365 May 13 j 04:56 15°≈ -4357 Apr 10 j 18:37 15° **)** 18'55 0°41'38 minimum elong -4357 Apr 10 j 07:14 15° **∺** 17'15 20.27823 AU retrograde -4365 Jun 25 j 20:25 15°≈45'58 max. Earth dist. -4357 Jul 30 j 08:24 19° **€** 31'20 -4365 Aug 08 j 23:37 15°R≈ retrograde opposition -4365 Sep 10 j 06:14 13°≈45'23 0°-55'-27 opposition -4357 Oct 13 j 07:07 17° ¥ 30'05 0°-44'-53 -4365 Sep 10 j 00:37 13°≈45'58 18.73611 AU min. Earth dist. min. Earth dist. -4357 Oct 13 j 17:13 17° **★**29'00 18.24375 AU direct -4365 Nov 23 j 19:42 11°≈46'48 direct -4357 Dec 27 j 01:56 15° **★**28'43 -4364 Feb 25 j 14:59 15°≈ -4356 Apr 14 j 14:12 19° **★** 39'32 0°-39'-18 conjunction -4364 Mar 10 j 02:06 15°≈46'12 0°-50'00 -4356 Apr 14 j 14:12 19°**米** 39'32 0°39'22 conjunction minimum elong minimum elong -4364 Mar 10 j 02:06 15°≈46'12 0°50'09 max. Earth dist. -4356 Apr 13 j 23:35 19° **★** 37'23 20.20893 AU max. Earth dist. -4364 Mar 10 j 06:27 15°≈46'50 20.70880 AU retrograde -4356 Aug 02 j 23:30 23°**米** 52'45 retrograde -4364 Jun 29 j 07:08 19°≈53'10 opposition -4356 Oct 16 j 19:11 21° **★**51'22 0°-42'-16 opposition -4364 Sep 13 j 13:35 17°≈52'28 0°-55'-9 min. Earth dist. -4356 Oct 17 j 08:18 21° ¥49'58 18.17386 AU min. Earth dist. -4364 Sep 13 j 10:28 17°≈52'47 18.68120 AU direct -4356 Dec 30 j 14:52 19° **€**49'33

-4364 Nov 27 j 02:00 15°≈53'32

direct

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4355 in astronomical counting style is the year 4356 BCE in historical counting style. -4355 Apr 19 i 10:26 24° **★** 01'55 0°-36'-49 direct -4347 Feb 04 i 08:45 25°**Y**38'48 conjunction -4355 Apr 19 j 10:26 24° **★** 01'55 0°36'53 -4347 May 26 j 00:11 29°**Υ**58'48 19.62396 AU minimum elong max. Earth dist. -4355 Apr 18 j 18:04 23° + 59'30 20.13861 AU -4347 May 26 j 07:58 max. Earth dist. 0°8 -4355 Aug 07 j 17:01 28°**光** 15'55 retrograde -4355 Oct 21 j 07:44 26° **H** 14'23 0°-39'-24 -4347 May 27 j 05:45 0°803'20 0°-9'-54 opposition conjunction -4355 Oct 21 j 21:47 26° **X** 12'52 18.10320 AU -4347 May 27 j 05:45 0°09'49 min. Earth dist. minimum elong 0°**8**03'20 -4354 Jan 04 j 06:32 24° **₭** 12'06 -4347 May 27 j 00:16 direct behind sun begin 0°**8**02'31 -4347 May 27 j 11:14 behind sun end 0°**8**04'09 -4347 Sep 13 j 03:45 conjunction -4354 Apr 24 j 07:32 28° **★**26'01 0°-34'-6 retrograde 4°**8**23'07 minimum elong -4354 Apr 24 j 07:32 28°**∺**26′01 0°34'08 opposition -4347 Nov 25 j 15:31 2°**8**20'56 0°-8'-47 max. Earth dist. -4354 Apr 23 j 12:32 28°**₭**23'12 20.06783 AU min. Earth dist. -4347 Nov 26 j 15:59 2°818'16 17.59846 AU -4354 May 21 j 05:08 $0^{\circ}\Upsilon$ -4346 Feb 09 j 06:21 direct 0°**8**15'44 -4354 Aug 12 j 09:00 2°Y40'46 -4346 May 31 j 02:30 retrograde max. Earth dist. 4°**8**37'06 19.57330 AU opposition -4354 Oct 25 j 20:59 0°**Ƴ**39'05 0°-36'-16 min. Earth dist. -4354 Oct 26 j 13:52 0°**Υ**37'16 18.03260 AU conjunction -4346 Jun 01 j 08:06 4°**8**41'39 0°-5'-56 -4354 Nov 10 j 06:13 30°**₹** minimum elong -4346 Jun 01 j 08:05 4°**8**41'39 0°05'50 direct -4353 Jan 08 j 20:39 28°\circ 36'20 behind sun begin -4346 Jun 01 j 01:37 4°840'41 -4353 Mar 07 j 20:50 $0^{\circ} \Upsilon$ behind sun end -4346 Jun 01 j 14:34 4°842'37 max. Earth dist. -4353 Apr 28 j 08:37 2°Υ48'43 19.99758 AU retrograde -4346 Sep 18 j 01:42 9°802'02 opposition -4346 Nov 30 j 11:15 6°**8**59'55 0°-4'-18 conjunction -4353 Apr 29 j 05:25 2°**Y**'51'49 0°-31'-10 min. Earth dist. -4346 Dec 01 j 13:11 6°**と**57'05 17.54950 AU minimum elong -4353 Apr 29 i 05:26 2°**Υ**51'49 0°31'11 direct -4345 Feb 14 i 03:42 4°854'29 retrograde -4353 Aug 17 j 03:57 7°**Υ**07'19 max. Earth dist. -4345 Jun 05 j 03:09 9°816'48 19.52600 AU opposition -4353 Oct 30 i 10:55 5°**Υ**'05'29 0°-32'-54 min. Earth dist. -4353 Oct 31 j 04:27 5°**Y**03'35 17.96283 AU conjunction -4345 Jun 06 i 10:47 9°**8**21'41 0°-1'-52 -4352 Jan 13 j 13:52 3°Y02'16 -4345 Jun 06 i 10:47 9°**8**21'41 0°01'46 direct minimum elong max. Earth dist. -4352 May 02 j 05:11 7°**Υ**15'55 19.92839 AU -4345 Jun 06 j 04:00 9°820'40 behind sun begin -4345 Jun 06 j 17:33 9°**8**22'42 behind sun end -4352 May 03 j 03:52 7°Υ19'18 0°-28'-1 -4345 Sep 22 j 23:56 13°**8**42'38 conjunction retrograde -4352 May 03 j 03:52 7°**Υ**19'18 -4345 Nov 17 j 22:17 12°**8**25'03 minimum elong 0°28'01 asc. node -4345 Dec 05 j 07:52 11°840'31 0°00'13 -4352 Aug 20 j 21:20 11°**Υ**35'33 retrograde opposition -4352 Nov 03 j 01:44 9°**Y**33'35 0°-29'-19 -4345 Dec 06 j 10:14 11°\(\mathbf{2}\)37'39 17.50391 AU min. Earth dist. opposition -4352 Nov 03 j 21:40 9°**Υ**31'25 17.89465 AU -4344 Feb 19 j 03:27 9°**8**34'53 min. Earth dist. direct -4344 Jun 09 j 06:38 13°**8**58'26 19.48191 AU -4351 Jan 17 j 05:40 7°**Y**29′56 direct max. Earth dist. -4351 May 07 j 02:34 11°**Υ**44'51 19.86136 AU max. Earth dist. -4344 Jun 10 j 13:50 14°**8**03'16 0°02'20 conjunction -4351 May 08 j 02:57 11° **Y** 48'31 0° -24'-42 -4344 Jun 10 j 13:50 14°**8**03'16 0°02'28 conjunction minimum elong minimum elong -4351 May 08 j 02:57 11°**Υ**48'31 0°24'41 behind sun begin -4344 Jun 10 j 07:05 14°**8**02'14 retrograde -4351 Aug 25 j 17:12 16°**Υ**05'29 behind sun end -4344 Jun 10 j 20:35 14°**8**04'17 opposition -4351 Nov 07 j 17:07 14°**Υ**03'24 0°-25'-32 -4344 Jun 25 j 22:16 15°**8** min. Earth dist. -4351 Nov 08 j 13:23 14°**Υ**01'12 17.82890 AU retrograde -4344 Sep 26 j 22:34 18°**8**24'41 -4350 Jan 22 j 00:06 11°**Υ**59'21 -4344 Dec 09 j 05:23 16°\begin{align*} 22'36 0°04'47 \end{align*} direct opposition max. Earth dist. -4350 May 12 j 01:16 16°**Υ**15'37 19.79691 AU min. Earth dist. -4344 Dec 10 j 08:37 16°819'38 17.46150 AU -4343 Jan 12 j 16:17 15°R8 -4350 May 13 j 02:45 16° Υ 19'28 0° -21'-12 -4343 Feb 23 j 03:24 14°**8**16'46 conjunction direct $-4350 \text{ May } 13 \text{ j } 02:45 \quad 16^{\circ} \Upsilon 19'28 \quad 0^{\circ} 21'11$ -4343 Apr 05 i 00:41 15°8 minimum elong -4350 Aug 30 j 12:14 20°**Υ**'37'10 -4343 Jun 14 j 08:09 18°841'03 19.44127 AU retrograde max. Earth dist. -4350 Nov 12 j 09:33 18°**Υ**'35'01 0°-21'-34 opposition -4350 Nov 13 j 07:50 18°**Υ**'32'35 17.76604 AU -4343 Jun 15 j 17:06 18°**8**46'10 0°06'25 min. Earth dist. conjunction minimum elong direct -4349 Jan 26 i 17:36 16°**Y**30'36 -4343 Jun 15 i 17:06 18°**8**46'10 0°06'33 max. Earth dist. -4349 May 16 j 23:52 20°**Υ**48'05 19.73573 AU behind sun begin -4343 Jun 15 j 10:46 18°**8**45'13 -4343 Jun 15 j 23:26 18°**8**47'08 behind sun end -4349 May 18 j 03:11 20°**Υ**'52'14 0°-17'-34 retrograde -4343 Oct 01 j 21:02 23°808'01 conjunction -4349 May 18 j 03:10 20°**Υ**52'14 minimum elong 0°17'30 opposition -4343 Dec 14 j 03:25 21°805'55 0°09'20 -4349 Sep 04 j 09:13 25° Υ10'39 -4343 Dec 15 j 07:08 21°**8**02'54 17.42278 AU retrograde min. Earth dist. opposition -4349 Nov 17 j 02:35 23°**Y**08'27 0°-17'-27 direct -4342 Feb 28 j 05:03 18°**8**59'52 min. Earth dist. -4349 Nov 18 j 01:05 23°Υ06'00 17.70660 AU -4348 Jan 31 j 13:38 21°**Υ**03'44 -4342 Jun 20 j 20:44 23°**8**30'13 0°10'27 direct conjunction -4348 May 21 j 00:36 25°**Υ**22'38 19.67799 AU -4342 Jun 20 j 20:44 23°**8**30'13 max. Earth dist. minimum elong 0°10'37 -4342 Jun 20 j 15:33 23°**8**29'26 behind sun begin -4348 May 22 j 04:19 25°**Υ**26'51 0°-13'-47 -4342 Jun 21 j 01:55 23°**8**31'00 conjunction behind sun end minimum elong $-4348 \text{ May } 22 \text{ j } 04:19 \quad 25^{\circ} \Upsilon 26'51$ 0°13'44 max. Earth dist. -4342 Jun 19 j 12:32 23°**8**25'12 19.40437 AU behind sun begin -4348 May 22 j 00:53 25°**Υ**26'20 retrograde -4342 Oct 06 j 20:23 27°**8**52'23 behind sun end -4348 May 22 j 07:46 25°**Υ**27'22 opposition -4342 Dec 19 j 02:17 25°**8**50'17 0°13'50 retrograde -4348 Sep 08 j 05:50 29°**Y**45'57 min. Earth dist. -4342 Dec 20 j 06:10 25°847'15 17.38781 AU -4348 Nov 20 j 20:43 27°**Υ**43'46 0°-13'-10 -4341 Mar 05 j 07:18 23°844'03 opposition direct min. Earth dist. -4348 Nov 21 j 20:52 27°**Υ**41'08 17.65071 AU -4341 Jun 24 j 14:56 28°809'58 19.37153 AU max. Earth dist.

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4341 in astronomical counting style is the year 4342 BCE in historical counting style. -4341 Jun 26 j 00:14 28°**8**15'10 0°14'27 opposition -4333 Jan 26 j 11:29 4°500'32 0°44'10 conjunction -4341 Jun 26 j 00:13 28°**8**15'10 min. Earth dist. -4333 Jan 27 j 08:25 3°958'16 17.30881 AU minimum elong 0°14'37 -4341 Jun 25 j 21:30 28°814'45 -4333 Apr 13 j 11:23 1°954'08 behind sun begin direct -4341 Jun 26 j 02:56 28°815'35 behind sun end -4341 Jul 24 j 15:04 -4333 Aug 03 j 21:10 Π $^{\circ}$ 0 conjunction 6°926'25 0°40'51 -4333 Aug 03 j 21:10 2°**Ⅲ**37'36 -4341 Oct 11 j 19:17 retrograde minimum elong 6°926'25 0°41'02 -4341 Dec 24 j 01:48 -4333 Aug 02 j 22:32 opposition 0°**I**35'29 0°18'15 max. Earth dist. 6°922'50 19.31688 AU -4333 Nov 18 j 19:45 min. Earth dist. -4341 Dec 25 j 06:01 0°**Д**32'24 17.35736 AU retrograde 10°9548'29 -4332 Jan 31 j 14:25 -4340 Jan 06 j 19:26 30°R**∀** opposition 8°**5**46'49 0°46'50 direct -4340 Mar 09 j 09:40 28°**8**29'03 min. Earth dist. -4332 Feb 01 j 10:50 8°544'37 17.32711 AU -4340 May 08 j 16:08 $0^{\circ}\Pi$ direct -4332 Apr 17 j 14:28 6°5540'39 -4340 Jun 28 j 19:44 max. Earth dist. 2°**Д**55'47 19.34350 AU -4332 Aug 07 j 22:00 11°5512'26 conjunction 0°43'06 conjunction -4340 Jun 30 j 03:48 3°**耳**00'49 0°18'21 minimum elong -4332 Aug 07 j 22:00 11°5512'26 0°43'18 minimum elong -4340 Jun 30 j 03:48 3°**Ⅱ**00'49 0°18'31 max. Earth dist. -4332 Aug 07 j 00:21 11°509'00 19.33796 AU retrograde -4340 Oct 15 j 19:47 7°**Ⅲ**23′25 retrograde -4332 Nov 22 j 20:54 15°534'11 opposition -4340 Dec 28 j 01:50 5°**Ⅲ**21'17 0°22'32 opposition -4331 Feb 04 j 17:13 13°532'39 0°49'11 min. Earth dist. -4340 Dec 29 j 05:19 5°**Ⅱ**18'17 17.33184 AU min. Earth dist. -4331 Feb 05 j 11:10 13°530'44 17.35074 AU direct -4339 Mar 14 j 13:04 3°**I**14'43 direct -4331 Apr 22 j 20:23 11°526'44 max. Earth dist. -4339 Jul 03 j 22:54 7°**Ц**41'54 19.32068 AU conjunction -4331 Aug 12 j 22:26 15°557'54 0°45'03 conjunction -4339 Jul 05 i 07:04 7°**II**46'57 0°22'08 minimum elong -4331 Aug 12 j 22:26 15°\$57'54 0°45'15 minimum elong -4339 Jul 05 i 07:03 7°**Ⅱ**46'57 0°22'20 max. Earth dist. -4331 Aug 12 j 03:37 15°554'55 19.36396 AU retrograde -4339 Oct 20 j 19:03 12°**Д**09'41 retrograde -4331 Nov 27 j 19:13 20°519'15 opposition -4338 Jan 02 j 02:26 10°**Д**07'31 0°26'41 opposition -4330 Feb 09 j 20:21 18°\$17'52 0°51'11 min. Earth dist. -4338 Jan 03 j 06:04 10°**I**I04'31 17.31194 AU min. Earth dist. -4330 Feb 10 j 13:33 18°5016'02 17.37897 AU -4338 Mar 19 i 15:03 8° **II** 00'49 direct -4330 Apr 27 j 23:58 16°5512'12 direct max. Earth dist. -4338 Jul 09 j 03:32 12°**Д**28'34 19.30373 AU -4330 Aug 17 j 22:05 20°542'36 conjunction 0°46'41 -4338 Jul 10 j 10:16 12°**Д**33'25 0°25'45 -4330 Aug 17 j 22:05 20°542'36 minimum elong conjunction 0°46'53 minimum elong -4338 Jul 10 j 10:16 12°**Д**33'25 0°25'57 -4330 Aug 17 j 04:05 20°539'45 19.39442 AU max. Earth dist. -4338 Oct 25 j 20:29 16°**Д**56'10 -4330 Dec 02 j 19:23 25°503'30 retrograde retrograde -4337 Jan 07 j 03:23 14°**Ц**54'01 0°30'39 -4329 Feb 14 j 23:19 23°502'14 0°52'49 opposition opposition -4337 Jan 08 j 05:30 14°**Ц**51'10 17.29801 AU min. Earth dist. -4329 Feb 15 j 14:03 23°500'40 17.41150 AU min. Earth dist. -4337 Mar 24 j 19:34 12°**Ⅲ**47'14 -4329 May 03 j 04:52 20°556'50 direct direct -4337 Jul 14 j 07:27 17°**II**15'21 19.29301 AU max. Earth dist. -4329 Aug 22 j 21:13 25°\$26'20 0°48'00 conjunction conjunction -4337 Jul 15 j 13:12 17°**Д**20'03 0°29'13 minimum elong -4329 Aug 22 j 21:13 25°\$26'20 0°48'12 minimum elong -4337 Jul 15 j 13:12 17°**Ⅲ**20'03 max. Earth dist. -4329 Aug 22 j 06:19 25°\$23'59 19.42894 AU retrograde -4337 Oct 30 j 19:25 21°**Д**42'46 retrograde -4329 Dec 07 j 17:36 29°546'43 opposition -4336 Jan 12 j 05:02 19°**Ц**40'39 0°34'24 opposition -4328 Feb 20 j 02:21 27°545'34 0°54'06 min. Earth dist. -4336 Jan 13 j 06:56 19°**Д**37'50 17.29072 AU min. Earth dist. -4328 Feb 20 j 15:48 27°544'08 17.44789 AU -4336 Mar 28 j 21:28 17°**Д**33'52 direct -4328 May 07 j 08:24 25°540'26 direct max. Earth dist. -4336 Jul 18 j 11:23 22°**Д**02'16 19.28913 AU -4328 Aug 24 j 11:06 $0^{\circ}\Omega$ -4336 Jul 19 j 15:38 22°**Ⅱ**06'45 0°32'28 -4328 Aug 26 j 19:19 0°Ω08'53 0°48'59 conjunction conjunction -4336 Jul 19 j 15:38 22°**Ⅱ**06'45 -4328 Aug 26 j 19:19 0°Ω08'53 0°49'09 minimum elong 0°32'40 minimum elong -4336 Nov 03 j 21:08 26°**Д**29'24 -4328 Aug 26 i 05:24 0°**Ω**06'41 19.46728 AU retrograde max. Earth dist. 4°Ω28'42 opposition -4335 Jan 16 i 06:52 24°**I**27'20 0°37'55 retrograde -4328 Dec 11 j 16:34 opposition min. Earth dist. -4335 Jan 17 j 06:33 24°**П**24'46 17.29015 AU -4327 Feb 24 i 04:58 2°Ω27'37 0°55'00 direct -4335 Apr 03 j 02:50 22°**Д**20'38 min. Earth dist. -4327 Feb 24 j 16:05 2°Ω26'27 17.48807 AU direct -4327 May 12 j 11:17 0°**Ω**22'46 -4335 Jul 24 j 17:56 26° **II** 53'26 0°35'31 conjunction 4°Ω50'04 0°49'38 minimum elong -4335 Jul 24 j 17:56 26°**Д**53'26 0°35'42 conjunction -4327 Aug 31 j 16:49 -4327 Aug 31 j 16:49 max. Earth dist. -4335 Jul 23 j 15:33 26°**П**49'15 19.29195 AU minimum elong 4°Ω50'04 0°49'48 -4335 Sep 16 j 23:32 0ಂತಾ max. Earth dist. -4327 Aug 31 j 06:07 4°**Ω**48'23 19.50926 AU retrograde -4335 Nov 08 j 19:45 1°9915'56 retrograde -4327 Dec 16 j 14:18 9°**Ω**09'14 -4334 Jan 03 j 04:45 30°RⅡ -4326 Mar 01 j 07:13 7°Ω08'14 0°55'31 opposition -4334 Jan 21 j 09:01 29°**Ⅱ**13'59 0°41'11 -4326 Mar 01 j 16:32 7°**Ω**07'15 17.53173 AU opposition min. Earth dist. -4334 Jan 22 j 08:24 29°**Ⅱ**11'28 17.29632 AU direct -4326 May 17 j 14:22 5°**Ω**03'40 min. Earth dist. -4334 Apr 08 j 05:18 27°**Ⅲ**07'25 direct -4334 Jul 02 j 21:22 0 \circ \odot conjunction -4326 Sep 05 j 13:17 9°**Ω**29'42 0°49'57 minimum elong -4326 Sep 05 j 13:17 9°**ん**29'42 0°50'07 conjunction -4334 Jul 29 j 19:46 1°540'02 0°38'18 max. Earth dist. -4326 Sep 05 j 03:57 9°**Ω**28'14 19.55484 AU minimum elong -4334 Jul 29 j 19:46 1°9540'02 0°38'31 retrograde -4326 Dec 21 j 12:07 13°Ω48'12 -4334 Jul 28 j 18:34 1°536'02 19.30143 AU -4325 Mar 06 j 09:14 $11^{\circ}\Omega$ 47'14 $0^{\circ}55'41$ max. Earth dist. opposition retrograde -4334 Nov 13 j 21:14 6°9502'20 min. Earth dist. -4325 Mar 06 j 16:18 11° **Ω**46'30 17.57920 AU Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 6 Attention, astronomical year style is used: The year -4325 in astronomical counting style is the year 4326 BCE in historical counting style.

Attention, astronom	ical year style is used: Tl	ne year -4325	in astronomical cou	inting style is the year	4326 BCE in historical	counting style	
direct	-4325 May 22 j 15:30			retrograde	-4317 Jan 26 j 18:05		
				opposition	-4317 Apr 13 j 05:12	17° m 55'27	0°44'50
conjunction	-4325 Sep 10 j 08:48	14° Ω 07'38	0°49'56	min. Earth dist.	-4317 Apr 12 j 17:47	17° m 56'37	18.07825 AU
minimum elong	-4325 Sep 10 j 08:48	14° Ω 07'38	0°50'05	direct	-4317 Jun 29 j 06:20	15° m 54'27	
max. Earth dist.	-4325 Sep 10 j 02:56	14° Ω 06'42	19.60422 AU				
	-4325 Sep 24 j 08:14	15° Ω		conjunction	-4317 Oct 15 j 14:08	20° Mp 06'52	0°39'13
retrograde	-4325 Dec 26 j 09:20	18° Ω 25'24		minimum elong	-4317 Oct 15 j 14:08	20° m/06'52	0°39'16
opposition	-4324 Mar 10 j 10:46	16° Ω 24'29	0°55'28	max. Earth dist.	-4317 Oct 16 j 03:00	20° m 08'49	20.11288 AU
min. Earth dist.	-4324 Mar 10 j 15:14	16° Ω 24'01	17.63040 AU	retrograde	-4316 Jan 31 j 11:04	24° Mp 18'31	
	-4324 Apr 16 j 09:17	15°R Ω		min. Earth dist.	-4316 Apr 16 j 11:28	22° m 19'58	18.14727 AU
direct	-4324 May 26 j 17:59	14° Ω 20'31		opposition	-4316 Apr 17 j 01:46	22° Mp 18'30	0°42'11
	-4324 Jul 04 j 22:14	15° Ω		direct	-4316 Jul 03 j 02:26	20° Ny 17° 56	
conjunction	-4324 Sep 14 j 03:23	18° Ω 43'46	0°49'36	conjunction	-4316 Oct 19 j 02:27	24° Mp $28'46$	0°36'44
minimum elong	-4324 Sep 14 j 03:23	18° Ω 43'46	0°49'45	minimum elong	-4316 Oct 19 j 02:28	24° Mp 28'46	0°36'45
max. Earth dist.	-4324 Sep 13 j 23:21	18° Ω 43′08	19.65742 AU	max. Earth dist.	-4316 Oct 19 j 17:20	24° Mp 31'02	20.18139 AU
retrograde	-4324 Dec 30 j 05:37	23° Ω 00'48		retrograde	-4315 Feb 04 j 01:32	28° m 39'38	
opposition	-4323 Mar 15 j 11:39	20° Ω 59'56	0°54'54	opposition	-4315 Apr 21 j 21:34	26° Mp 39'44	0°39'18
min. Earth dist.	-4323 Mar 15 j 14:00	20° Ω 59'41	17.68566 AU	min. Earth dist.	-4315 Apr 21 j 06:42	26° Mp 41'15	18.21529 AU
direct	-4323 May 31 j 17:45	18° Ω 56′18		direct	-4315 Jul 07 j 19:03	24° m 39'34	
conjunction	-4323 Sep 18 j 21:12	23° Ω 18′05	0°48'58	conjunction	-4315 Oct 23 j 14:02	28° m 48'50	0°34'04
minimum elong	-4323 Sep 18 j 21:12	23° Ω 18′05	0°49'05	minimum elong	-4315 Oct 23 j 14:02	28° Mp 48'50	0°34'05
max. Earth dist.	-4323 Sep 18 j 20:24			max. Earth dist.	-4315 Oct 24 j 06:08		
retrograde	-4322 Jan 04 j 01:32				-4315 Nov 12 j 09:28	0∘ ⊽	
opposition	-4322 Mar 20 j 12:02		0°54'00	retrograde	-4314 Feb 08 j 17:37	2° £ 58'56	
min. Earth dist.	-4322 Mar 20 j 11:18			opposition	-4314 Apr 26 j 16:37		0°36'13
direct	-4322 Jun 05 j 19:22			min. Earth dist.	-4314 Apr 25 j 23:05		18.28182 AU
	1522 van 60 j 15.22	23 003021		mm. Darur dige.	-4314 May 22 j 00:35		10.20102110
conjunction	-4322 Sep 23 j 13:58	27°Ω50'36	0°48'01	direct	-4314 Jul 12 j 13:24		
minimum elong	-4322 Sep 23 j 13:58			uncet	-4314 Aug 30 j 15:15	0∘ <mark>ಹ</mark>	
max. Earth dist.	-4322 Sep 23 j 15:19				-4314 Aug 30 j 13.13	v –	
max. Larm dist.	-4322 Sep 29 j 19:19	0°m	17.77542 AO	conjunction	-4314 Oct 28 j 00:47	ვ° ჲ 07'00	0°31'13
retrograde	-4321 Jan 08 j 20:27	2° m) 06'07		minimum elong	-4314 Oct 28 j 00:47	3° ⊆ 07'00	
opposition	-4321 Mar 25 j 12:00	0° m) 05'27	0°52'46	max. Earth dist.	-4314 Oct 28 j 19:01		20.31436 AU
min. Earth dist.	-4321 Mar 25 j 09:20		17.80717 AU	retrograde	-4313 Feb 13 j 06:43	3 = 0943 7° ⊆ 16'20	20.31430 AU
iiiii. Latui dist.			17.80/1/ AU	opposition	·	7 = 16 20 5° ⊆ 16'31	0022157
1:4	-4321 Mar 27 j 16:26			**	-4313 May 01 j 11:04		18.34658 AU
direct	-4321 Jun 10 j 17:35			min. Earth dist.	-4313 Apr 30 j 17:01 -4313 Jul 17 j 04:42		18.34038 AU
	-4321 Aug 19 j 02:20	0° m)		direct	-4313 Jul 1/J 04:42	3° ≙ 17'03	
conjunction	-4321 Sep 28 j 06:02	2°m/21'21	0046147	conjunction	-4313 Nov 01 j 10:54	7° £ 23'15	0°28'13
minimum elong	-4321 Sep 28 j 06:02	2° m) 21'21	0°46'53	minimum elong	-4313 Nov 01 j 10:54	7° ⊆ 23'15	0°28'12
_	-4321 Sep 28 j 10:18		19.83958 AU		-4313 Nov 01 j 10:54 -4313 Nov 02 j 06:09		20.37830 AU
max. Earth dist.		-	19.83938 AU	max. Earth dist.	3	7° Ω 26'09	20.37830 AU
retrograde	-4320 Jan 13 j 15:08	6° Mp 36'05	0051112	retrograde	-4312 Feb 17 j 21:21	11° £ 31'50	10 40067 ATT
opposition	-4320 Mar 29 j 11:10	4° m) 35'34		min. Earth dist.	-4312 May 04 j 07:49		18.40967 AU
min. Earth dist.	-4320 Mar 29 j 05:15		17.87258 AU	opposition	-4312 May 05 j 04:20	9° £ 32'01	0°29'32
direct	-4320 Jun 14 j 17:32	2°M 33'12		direct	-4312 Jul 20 j 21:05	7° £ 32'51	
conjunction	-4320 Oct 01 j 21:10	6° Mp 50'22	00/15/16	conjunction	-4312 Nov 04 j 20:17	110027125	0°25'05
-	•			-	•		
minimum elong	-4320 Oct 01 j 21:10	6° Mp 50'22		minimum elong	-4312 Nov 04 j 20:17		0°25'04
max. Earth dist.	-4320 Oct 02 j 03:40	-	19.90614 AU	max. Earth dist.	-4312 Nov 05 j 17:45		20.44048 AU
retrograde	-4319 Jan 17 j 08:28	11° Mp 04'20	0040100	retrograde	-4311 Feb 21 j 09:13		0005150
opposition	-4319 Apr 03 j 09:52	9° m 03'56		opposition	-4311 May 09 j 20:56		0°25'59
min. Earth dist.	-4319 Apr 03 j 02:33		17.94015 AU	min. Earth dist.	-4311 May 08 j 23:54		18.47112 AU
direct	-4319 Jun 19 j 13:59	7° Mp 02'03		direct	-4311 Jul 25 j 10:49	11° £ 46'45	
aani	4210 0-4 06:11 27	110m 17100	0942120	aamir	4211 NI 00 104 52	150 0 50100	0021151
conjunction	-4319 Oct 06 j 11:35		0°43'30	conjunction	-4311 Nov 09 j 04:53		0°21'51
minimum elong	-4319 Oct 06 j 11:35	11° m) 17'38	0°43'35	minimum elong	-4311 Nov 09 j 04:53		0°21'47
max. Earth dist.	-4319 Oct 06 j 20:25	-	19.97447 AU	max. Earth dist.	-4311 Nov 10 j 03:19		20.50124 AU
retrograde	-4318 Jan 22 j 02:06	15° m 30'49		retrograde	-4310 Feb 25 j 22:24		
opposition	-4318 Apr 08 j 07:42	13° m 30'34	0°47'14	opposition	-4310 May 14 j 12:34		0°22'19
min. Earth dist.	-4318 Apr 07 j 21:18		18.00892 AU	min. Earth dist.	-4310 May 13 j 13:07		18.53126 AU
direct	-4318 Jun 24 j 11:52	11° m 29'08		direct	-4310 Jul 30 j 00:56	15° ≏ 58'49	
							0045:-:
conjunction	-4318 Oct 11 j 01:16		0°41'28	conjunction	-4310 Nov 13 j 13:01		0°18'31
minimum elong	-4318 Oct 11 j 01:16	15° m 43'08	0°41'31	minimum elong	-4310 Nov 13 j 13:01		0°18'28
max. Earth dist.	-4318 Oct 11 j 12:19	15° m 44'50	20.04356 AU	max. Earth dist.	-4310 Nov 14 j 13:46	20° ≏ 04'27	20.56067 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4309 in astronomical counting style is the year 4310 BCE in historical counting style. -4309 Mar 02 j 09:27 24° **2**07'16 opposition -4303 Jun 13 i 05:58 16° ML41'12 0°-4'-46 retrograde -4309 May 18 j 03:28 22° **2**09'56 18.59014 AU -4303 Aug 03 j 04:57 15°RML min. Earth dist. -4309 May 19 j 03:32 22°**2**07'30 0°18'34 -4303 Aug 28 j 01:58 14° ML44'41 opposition direct -4309 Aug 03 j 13:17 20° **2**09'14 -4303 Sep 21 j 11:14 15°M direct -4309 Nov 17 j 20:32 24°**£**09'54 0°15'07 -4303 Dec 11 j 10:46 18°M39'26 0°-6'-5 conjunction conjunction -4309 Nov 17 j 20:32 24°**Ω**09'54 -4303 Dec 11 j 10:46 18°M39'26 minimum elong 0°15'02 minimum elong 0°06'14 -4309 Nov 17 j 17:57 24°**♀**09'32 -4303 Dec 11 j 04:33 18°MJ38'33 behind sun begin behind sun begin -4303 Dec 11 j 16:59 18°ML40'18 behind sun end -4309 Nov 17 j 23:08 24°**♀**10'17 behind sun end max. Earth dist. -4309 Nov 18 j 21:57 24°**2**13'40 20.61893 AU max. Earth dist. -4303 Dec 12 j 16:50 18°M 43'47 20.91854 AU retrograde -4308 Mar 05 j 22:01 28° **△**15'49 retrograde -4302 Mar 31 j 12:28 22° 11.42'40 -4302 Jun 16 j 10:57 20°ML46'17 18.93779 AU opposition -4308 May 22 j 17:38 26°**△**16'05 0°14'45 min. Earth dist. -4302 Jun 17 j 16:19 20°M-43'21 min. Earth dist. -4308 May 21 j 15:28 26°**△**18'43 18.64770 AU opposition 0°-8'-38 direct -4308 Aug 07 j 00:54 24°**2**18'08 direct -4302 Sep 01 j 10:05 18°ML47'01 conjunction -4308 Nov 21 j 03:45 28° **2**17'37 0°11'39 conjunction -4302 Dec 15 j 16:36 22°ML41'03 0°-9'-32 minimum elong -4308 Nov 21 j 03:45 28°**£**17'37 0°11'34 minimum elong -4302 Dec 15 j 16:36 22°ML41'03 0°09'43 behind sun begin -4308 Nov 20 j 22:59 28°**♀**16'56 behind sun begin -4302 Dec 15 j 11:11 22°M40'17 behind sun end -4308 Nov 21 j 08:30 28°**£**18'18 behind sun end -4302 Dec 15 j 22:02 22°M41'49 max. Earth dist. -4308 Nov 22 j 07:13 28° **2**21'40 20.67554 AU max. Earth dist. -4302 Dec 16 j 23:38 22°ML45'32 20.95493 AU -4308 Dec 20 j 23:19 0°M retrograde -4301 Apr 04 j 19:57 26° ML43'58 retrograde -4307 Mar 10 j 08:02 2°M22'57 min. Earth dist. -4301 Jun 20 j 21:12 24° ML47'33 18.97164 AU min. Earth dist. -4307 May 26 i 04:22 0°M25'59 18.70340 AU opposition -4301 Jun 22 j 02:03 24°M-44'40 0°-12'-27 opposition -4307 May 27 i 06:55 0°M23'18 0°10'53 direct -4301 Sep 05 j 17:47 22°ML48'28 -4307 Jun 06 j 00:31 30°R Ω -4307 Aug 11 j 12:13 28° **2**25'41 -4301 Dec 19 j 22:12 26°M41'50 direct conjunction 0°-12'-57 -4307 Oct 12 j 16:26 -4301 Dec 19 j 22:12 26°M41'50 oom. minimum elong 0°13'07 -4301 Dec 19 j 18:14 26° ML41'17 behind sun begin -4307 Nov 25 j 10:26 2°ML24'03 0°08'09 -4301 Dec 20 j 02:11 26°M42'24 conjunction behind sun end -4307 Nov 25 j 10:26 0°08'04 max. Earth dist. -4301 Dec 21 j 04:06 26°M 46'09 20.98625 AU minimum elong 2°M24'03 -4307 Nov 25 j 04:35 -4300 Feb 24 j 21:56 0°**∡**¹ behind sun begin 2°M-23'13 -4307 Nov 25 j 16:17 -4300 Apr 08 j 05:40 0°**х** 44′28 behind sun end 2°M24'54 retrograde max. Earth dist. -4300 May 22 j 17:04 30°RM -4307 Nov 26 j 14:11 2°M28'08 20.73030 AU -4300 Jun 24 j 06:28 28°ML48'00 19.00037 AU -4306 Mar 14 j 20:15 retrograde 6°M28'54 min. Earth dist. -4306 May 31 j 19:40 4°M29'19 0°06'58 -4300 Jun 25 j 11:15 28°M 45'07 0°-16'-11 opposition opposition -4306 May 30 j 15:28 -4300 Sep 09 j 01:01 26° M 49'00 min. Earth dist. 4°ML32'09 18.75704 AU direct -4300 Dec 10 j 23:57 direct -4306 Aug 15 j 22:06 2°M32'00 0° ×7 conjunction -4306 Nov 29 j 16:48 6°M29'21 0°04'38 conjunction -4300 Dec 23 j 03:45 0°**∡**141'48 0°-16'-16 minimum elong -4306 Nov 29 j 16:49 6°**M**29′21 0°04'32 minimum elong -4300 Dec 23 j 03:45 0°**∡**1'48 0°16'28 behind sun begin -4306 Nov 29 j 10:23 6°M28'26 max. Earth dist. -4300 Dec 24 j 10:23 0° ₹ 46'13 21.01229 AU behind sun end -4306 Nov 29 j 23:14 6°M30'16 retrograde -4299 Apr 12 j 12:44 4°**∡**¹44'09 max. Earth dist. -4306 Nov 30 j 22:25 6°M33'41 20.78254 AU -4299 Jun 29 j 19:48 2°**₹**44'45 0°-19'-49 opposition -4305 Mar 19 j 05:35 10°M33'44 min. Earth dist. -4299 Jun 28 j 15:36 2° ₹ 47'35 19.02390 AU retrograde -4305 Jun 04 j 03:30 8°M37'05 18.80784 AU direct -4299 Sep 13 j 07:52 0°**х** 48'41 min. Earth dist. opposition -4305 Jun 05 i 07:49 8°MJ34'15 0°03'03 -4299 Dec 27 i 09:04 4°×740'58 0°-19'-31 direct -4305 Aug 20 j 08:19 6°M37'14 conjunction -4299 Dec 27 i 09:04 minimum elong 4°**х** 40′58 0°19′43 -4305 Dec 03 j 22:58 10°M 33'38 0°01'03 -4299 Dec 28 j 14:31 conjunction max. Earth dist. 4° ₹ 45'12 21.03358 AU minimum elong -4305 Dec 03 i 23:00 10°ML33'38 0°00'57 retrograde -4298 Apr 16 i 21:09 8°**х** 43′07 behind sun begin -4305 Dec 03 j 16:27 10°M32'42 -4298 Jul 02 j 23:56 6° **₹** 46'26 19.04299 AU min. Earth dist. behind sun end -4305 Dec 04 j 05:32 10°M34'33 -4298 Jul 04 j 03:56 6°**х** 43′38 0°-23'-21 opposition -4305 Dec 05 j 04:24 10°M₂37'55 20.83179 AU max. Earth dist. direct -4298 Sep 17 j 13:55 4°**∡**¹47'33 desc. node -4304 Mar 19 j 04:09 14° ML37'17 retrograde -4304 Mar 22 j 17:13 14° M 37'35 conjunction -4298 Dec 31 j 14:25 8°**₹**39'26 0°-22'-39 -4304 Jun 08 j 19:06 12° ML38'10 $0^{\circ}00'$ -52 opposition minimum elong -4298 Dec 31 j 14:25 8°**∡**³39′26 0°22'51 min. Earth dist. -4304 Jun 07 j 13:53 12°ML41'06 18.85540 AU max. Earth dist. -4297 Jan 01 j 20:39 8° ₹ 43'46 21.05042 AU -4304 Aug 23 j 17:09 10°M41'25 -4297 Apr 21 j 04:30 12°**х** 41'24 direct retrograde -4297 Jul 07 j 08:03 10° ₹ 44'36 19.05776 AU min. Earth dist. -4304 Dec 07 j 05:05 14°MJ36'58 0°-2'-34 -4297 Jul 08 j 11:32 10° **₹** 41'50 0°-26'-45 conjunction opposition -4304 Dec 07 j 05:05 14°MJ36'58 -4297 Sep 21 j 19:57 minimum elong 0°02'44 direct 8°**∡**¹45'45 behind sun begin -4304 Dec 06 j 22:32 14°M36'03 behind sun end -4304 Dec 07 j 11:37 14°M37'54 conjunction -4296 Jan 04 j 19:47 12°**х** 37'20 0°-25'-40 max. Earth dist. -4304 Dec 08 j 11:49 14°ML41'26 20.87729 AU minimum elong -4296 Jan 04 j 19:47 12°**尽**37'20 0°25'53 -4304 Dec 13 j 19:28 15°M max. Earth dist. -4296 Jan 06 j 00:39 12°**х** 41'27 21.06329 AU -4303 Mar 27 j 01:36 18° ML40'32 -4296 Apr 24 j 12:17 16° ₹39'11 retrograde retrograde min. Earth dist. -4303 Jun 12 j 01:01 16°ML44'06 18.89883 AU -4296 Jul 11 j 18:35 14° ₹39'34 0°-30'-1 opposition

A	1 1 4 1 1 1 170	4206		4 4 1 1 4	4207 DOE: 1:4 : 1		
	nical year style is used: Th						
min. Earth dist.	-4296 Jul 10 j 15:32		19.06879 AU	min. Earth dist.	-4288 Aug 12 j 02:26		19.01265 AU
direct	-4296 Sep 25 j 00:54	12° × '43'27		direct	-4288 Oct 26 j 12:30	14° 6 28'43	
i 4 :	4205 I 00 : 01-20	160.72450	00 201 22	:	-4287 Feb 09 i 08:47	100=20110	00 451 51
conjunction	-4295 Jan 08 j 01:20			conjunction	,		
minimum elong	-4295 Jan 08 j 01:20		0°28'45	minimum elong	-4287 Feb 09 j 08:47		0°46'04
max. Earth dist.	-4295 Jan 09 j 06:46		21.07237 AU	max. Earth dist.	-4287 Feb 10 j 04:36		20.99840 AU
retrograde	-4295 Apr 28 j 19:43		10.05.05.433	retrograde	-4287 May 31 j 16:21		10.00252 111
min. Earth dist.	-4295 Jul 14 j 22:50			min. Earth dist.	-4287 Aug 16 j 09:58		
opposition	-4295 Jul 16 j 01:22		0°-33'-8	opposition	-4287 Aug 17 j 02:26		0°-51'-27
direct	-4295 Sep 29 j 06:02	16° ≯ ′40'51		direct	-4287 Oct 30 j 18:16	18° る 29'09	
i 4 :	4204 I 12:06.44	200.722100	00 211 10	:	4207 E-L 12:17.41	220222115	00 471 0
conjunction	-4294 Jan 12 j 06:44		0°-31'-18	conjunction	-4286 Feb 13 j 17:41		
minimum elong	3	20° x 32'08	0°31'31	minimum elong	-4286 Feb 13 j 17:41		
max. Earth dist.	-4294 Jan 13 j 10:40		21.07791 AU	max. Earth dist.	-4286 Feb 14 j 10:26		20.90080 AU
retrograde	-4294 May 03 j 03:54		10.07001 ATT	retrograde	-4286 Jun 05 j 02:06		00 52! 44
min. Earth dist.	-4294 Jul 19 j 06:03			opposition min. Earth dist.	-4286 Aug 21 j 08:38		
opposition	-4294 Jul 20 j 07:58		0-30-3		-4286 Aug 20 j 18:19		18.94942 AU
direct	-4294 Oct 03 j 10:24	20°×'38'08		direct	-4286 Nov 03 j 22:59	22°03012	
conjunction	-4293 Jan 16 j 12:43	24° / 120'27	0°-33'-55	conjunction	-4285 Feb 18 j 03:25	26° 云 25'01	0°-48'-10
minimum elong	-4293 Jan 16 j 12:43			minimum elong	-4285 Feb 18 j 03:25		
=	,			_			
max. Earth dist.	-4293 Jan 17 j 17:01		21.0/9/6 AU	max. Earth dist.	-4285 Feb 18 j 19:18	20° ⊘ 2/10	20.93036 AU
retrograde	-4293 May 07 j 11:28		00 201 52		-4285 May 05 j 14:28		
opposition	-4293 Jul 24 j 14:10			retrograde	-4285 Jun 09 j 11:38	0°≈29'24 30°Rる	
min. Earth dist.	-4293 Jul 23 j 13:02		19.07973 AU	•,•	-4285 Jul 14 j 18:57	• -	00 521 45
direct	-4293 Oct 07 j 15:00	24° x '35'31		opposition	-4285 Aug 25 j 14:39	28°る29'18	
	4202 I 20:10.52	200 726157	00 24 22	min. Earth dist.	-4285 Aug 25 j 01:47		18.91072 AU
conjunction	-4292 Jan 20 j 18:52			direct	-4285 Nov 08 j 04:46	26° ප 31'57	
minimum elong	-4292 Jan 20 j 18:52		0°36'35		-4284 Feb 14 j 12:20	0° ≈	
max. Earth dist.	-4292 Jan 21 j 21:14		21.07783 AU		4004 F. L. 00 : 12 02	00 - 27122	00 401 50
	-4292 Feb 17 j 17:35	0°る		conjunction	-4284 Feb 22 j 13:32	0°≈27'33	0°-48'-58
retrograde	-4292 May 10 j 20:17	2°る29'02	00 411 20	minimum elong	-4284 Feb 22 j 13:32	0°≈27'33	0°49'10
opposition	-4292 Jul 27 j 20:20		0°-41'-30	max. Earth dist.	-4284 Feb 23 j 02:18		20.88976 AU
min. Earth dist.	-4292 Jul 26 j 20:18		19.07578 AU	retrograde	-4284 Jun 12 j 22:04	4°≈32'25	
	-4292 Aug 09 j 01:27	30°R. ✓		opposition	-4284 Aug 28 j 20:59	2°≈32'09	
direct	-4292 Oct 10 j 19:00	28° ₹ 33'08		min. Earth dist.	-4284 Aug 28 j 10:16		18.86829 AU
	-4292 Dec 09 j 11:06	0°₹		direct	-4284 Nov 11 j 10:27	0° ≈ 34′29	
	-		09 291 20		-		00 401 22
conjunction	-4291 Jan 24 j 01:26	2° ප 24'49		conjunction	-4283 Feb 26 j 00:12	4° ≈ 30'57	0°-49'-32
minimum elong	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26	2°る24'49 2°る24'49	0°38'52	conjunction minimum elong	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12	4°≈30'57 4°≈30'57	0°49'43
minimum elong max. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50	2° ට 24'49 2°ට24'49 2°ට28'34		conjunction minimum elong max. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15	4°≈30'57 4°≈30'57 4°≈32'40	
minimum elong max. Earth dist. retrograde	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06	2°524'49 2°524'49 2°528'34 6°527'06	0°38'52 21.07170 AU	conjunction minimum elong max. Earth dist. retrograde	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19	0°49'43 20.84558 AU
minimum elong max. Earth dist. retrograde min. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44	0°38'52 21.07170 AU 19.06739 AU	conjunction minimum elong max. Earth dist. retrograde opposition	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55	0°49'43 20.84558 AU 0°-55'-1
minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25	0°38'52 21.07170 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54	0°49'43 20.84558 AU
minimum elong max. Earth dist. retrograde min. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44	0°38'52 21.07170 AU 19.06739 AU	conjunction minimum elong max. Earth dist. retrograde opposition	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55	0°49'43 20.84558 AU 0°-55'-1
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 Jan 25 j 03:50 -4291 Jan 31 j 03:22 -4291 Jul 31 j 03:22 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 28 j 08:24	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12 6° පි23'11	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29	2° \(\frac{7}{2}\)2° \(\frac{7}{2}\)2° \(\frac{7}{2}\)34\) 6° \(\frac{7}{2}\)2° \(\frac{7}{2}\)31'12\ 6° \(\frac{7}{2}\)31'12\ 6° \(\frac{7}{2}\)31'11 6° \(\frac{7}{2}\)31'11	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈35'20	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12 6° පි23'11 6° පි23'11 6° පි26'36 10° පි25'45	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12 6° පි23'11 6° පි23'11 6° පි26'36 10° පි25'45 8° පි28'14	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00 -4290 Aug 05 j 08:23	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12 6° පි23'11 6° පි23'11 6° පි26'36 10° පි25'45 8° පි28'14 8° පි26'04	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06 -4282 Sep 06 j 02:46	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43 10°≈41'29	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00	2° පි24'49 2° පි24'49 2° පි28'34 6° පි27'06 4° පි29'44 4° පි27'25 2° පි31'12 6° පි23'11 6° පි23'11 6° පි26'36 10° පි25'45 8° පි28'14	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00 -4290 Aug 05 j 08:23 -4290 Oct 19 j 03:25	2°\overline{224'49} 2°\overline{224'49} 2°\overline{228'34} 6°\overline{227'06} 4°\overline{229'44} 4°\overline{227'25} 2°\overline{331'12} 6°\overline{223'11} 6°\overline{223'11} 6°\overline{225'45} 8°\overline{228'14} 8°\overline{226'04} 6°\overline{229'46}	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU 19.05447 AU 0°-46'-8	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06 -4282 Sep 06 j 02:46 -4282 Nov 19 j 22:48	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43 10°≈40'43 10°≈41'29 8°≈42'24	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14 18.77416 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00 -4290 Aug 05 j 08:23 -4290 Oct 19 j 03:25 -4289 Feb 01 j 16:02	2° \(\frac{2}{2}\)4'49 2° \(\frac{2}{2}\)4'49 2° \(\frac{2}{2}\)7'06 4° \(\frac{2}{2}\)9'44 4° \(\frac{2}{2}\)7'12 6° \(\frac{2}{2}\)3'11 6° \(\frac{2}{2}\)3'14 8° \(\frac{2}{2}\)6'04 6° \(\frac{2}{2}\)9'46	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU 19.05447 AU 0°-46'-8	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction conjunction	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06 -4282 Sep 06 j 02:46 -4282 Nov 19 j 22:48 -4281 Mar 06 j 23:38	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43 10°≈41'29 8°≈42'24	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14 18.77416 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-4291 Jan 24 j 01:26 -4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 05 j 08:23 -4290 Aug 05 j 08:23 -4290 Oct 19 j 03:25 -4289 Feb 01 j 16:02 -4289 Feb 01 j 16:02	2°22'11 2°22'11 2°22'11 6°22'11 6°22'11 6°22'11 6°22'11 10°22'11 10°22'11	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU 19.05447 AU 0°-46'-8 0°-42'-39 0°42'53	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06 -4282 Sep 06 j 02:46 -4282 Nov 19 j 22:48 -4281 Mar 06 j 23:38 -4281 Mar 06 j 23:38	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43 10°≈41'29 8°≈42'24 12°≈40'51 12°≈40'51	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14 18.77416 AU 0°-49'-55 0°50'04
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minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4291 Jan 24 j 01:26 -4291 Jan 25 j 03:50 -4291 Jan 25 j 03:50 -4291 May 15 j 04:06 -4291 Jul 31 j 03:22 -4291 Aug 01 j 02:21 -4291 Oct 14 j 23:39 -4290 Jan 28 j 08:24 -4290 Jan 29 j 08:29 -4290 May 19 j 13:17 -4290 Aug 04 j 11:00 -4290 Aug 05 j 08:23 -4290 Oct 19 j 03:25 -4289 Feb 01 j 16:02 -4289 Feb 01 j 16:02 -4289 Feb 02 j 15:38 -4289 Aug 09 j 14:23 -4289 Aug 08 j 18:26 -4289 Oct 23 j 08:36 -4288 Feb 06 j 00:07 -4288 Feb 06 j 00:07	2°\overline{224'49} 2°\overline{224'49} 2°\overline{224'49} 2°\overline{229'44} 4°\overline{229'44} 4°\overline{229'11} 6°\overline{223'11} 6°\overline{225'45} 8°\overline{225'45} 8°\overline{229'46} 10°\overline{229'46} 10°\overline{229'11} 10°\overline{229'11} 10°\overline{229'11} 10°\overline{229'11} 10°\overline{229'11} 12°\overline{229'12} 12°\overline{229'22} 10°\overline{225'22} 112°\overline{229'22} 112°\ov	0°38'52 21.07170 AU 19.06739 AU 0°-43'-55 0°-40'-45 0°40'58 21.06114 AU 19.05447 AU 0°-46'-8 0°-42'-39 0°42'53 21.04562 AU 0°-48'-9 19.03624 AU 0°-44'-22 0°44'34 21.02476 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist.	-4283 Feb 26 j 00:12 -4283 Feb 26 j 00:12 -4283 Feb 26 j 12:15 -4283 Jun 17 j 08:10 -4283 Sep 02 j 03:25 -4283 Sep 01 j 17:53 -4283 Nov 15 j 16:21 -4282 Mar 02 j 11:28 -4282 Mar 02 j 11:28 -4282 Mar 02 j 20:26 -4282 Jun 21 j 19:23 -4282 Sep 06 j 10:06 -4282 Sep 06 j 02:46 -4282 Nov 19 j 22:48 -4281 Mar 06 j 23:38 -4281 Mar 06 j 23:38 -4281 Mar 07 j 07:48 -4281 Jun 26 j 06:31 -4281 Sep 05 j 09:29 -4281 Sep 10 j 17:05 -4281 Sep 10 j 10:54 -4281 Nov 24 j 05:48	4°≈30'57 4°≈30'57 4°≈32'40 8°≈36'19 6°≈35'55 6°≈36'54 4°≈37'56 8°≈35'20 8°≈35'20 8°≈36'37 12°≈41'16 10°≈40'43 10°≈41'29 8°≈42'24 12°≈40'51 12°≈40'51 12°≈42'01 15°≈ 16°≈47'22 15°≈≈ 14°≈46'43 14°≈46'43	0°49'43 20.84558 AU 0°-55'-1 18.82251 AU 0°-49'-51 0°50'02 20.79848 AU 0°-55'-14 18.77416 AU 0°-49'-55 0°50'04 20.74888 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4280 in astronomical counting style is the year 4281 BCE in historical counting style. -4280 Mar 10 i 17:16 16°≈48'22 20.69705 AU minimum elong -4272 Apr 15 j 01:14 20° ¥ 42'07 0°38'55 max. Earth dist. -4280 Jun 29 j 18:07 20°≈54'49 retrograde -4272 Aug 03 j 10:51 24°\\$55'21 retrograde -4280 Sep 14 j 00:28 18°≈54'04 0°-54'-51 -4272 Oct 17 j 06:52 22° ¥ 53'54 0°-41'-45 opposition opposition -4272 Oct 17 j 19:44 22° **€** 52'31 18.17103 AU min. Earth dist. -4280 Sep 13 j 20:35 18°≈54'29 18.67054 AU min. Earth dist. -4280 Nov 27 j 12:43 16°≈55'08 -4272 Dec 31 j 02:08 20° ¥ 52'03 direct direct -4279 Mar 15 j 01:55 20°≈55'54 0°-49'-17 conjunction conjunction -4271 Apr 19 j 21:34 25° **★**04'22 0°-36'-20 -4271 Apr 19 j 21:35 25° **H** 04'22 0° 36'23 minimum elong -4279 Mar 15 j 01:55 20°≈55'54 0°49'26 minimum elong max. Earth dist. -4279 Mar 15 j 06:00 20°≈56'29 20.64330 AU max. Earth dist. -4271 Apr 19 j 05:36 25° **★**02'01 20.13614 AU retrograde -4279 Jul 04 j 06:50 25°≈03'45 retrograde -4271 Aug 08 j 04:23 29°**米** 18'22 opposition -4279 Sep 18 j 08:14 23°≈02'56 0°-54'-14 opposition -4271 Oct 21 j 19:17 27° ¥ 16'47 0°-38'-52 -4271 Oct 22 j 09:04 27° **X** 15'18 18.10117 AU min. Earth dist. -4279 Sep 18 j 05:31 23°≈03'13 18.61576 AU min. Earth dist. -4279 Dec 01 j 21:16 21°≈03'41 -4270 Jan 04 j 17:41 25° **₭** 14'29 direct direct conjunction -4278 Mar 19 j 16:10 25°≈05'44 0°-48'-35 conjunction -4270 Apr 24 j 18:34 29° **★** 28'21 0°-33'-37 minimum elong -4278 Mar 19 j 16:10 25°≈05'44 0°48'43 minimum elong -4270 Apr 24 j 18:34 29°**∺**28'21 0°33'39 max. Earth dist. -4278 Mar 19 j 16:56 25°≈05'50 20.58764 AU max. Earth dist. -4270 Apr 23 j 23:50 29° **∺**25'34 20.06632 AU retrograde -4278 Jul 08 j 18:59 29°≈14'19 -4270 May 03 j 15:46 $0^{\circ}\Upsilon$ opposition -4278 Sep 22 j 16:36 27°≈13'26 0°-53'-19 retrograde -4270 Aug 12 j 20:11 3°Y43'07 min. Earth dist. -4278 Sep 22 j 16:32 27°≈13'27 18.55910 AU opposition -4270 Oct 26 j 08:37 1°\bar{Y}41'23 0°-35'-43 direct -4278 Dec 06 j 04:56 25°≈13'53 min. Earth dist. -4270 Oct 27 j 01:04 1°**Υ**39'37 18.03169 AU -4270 Dec 11 j 14:49 30°R**)**€ conjunction -4277 Mar 24 i 07:37 29°≈17'17 0°-47'-37 direct -4269 Jan 09 i 08:10 29° ¥38'38 minimum elong -4277 Mar 24 i 07:37 29°≈17'17 0°47'45 -4269 Feb 06 i 20:44 max. Earth dist. -4277 Mar 24 i 07:09 29°≈17'13 20.52990 AU -4277 Apr 05 j 15:21 0°**∀** -4269 Apr 29 j 16:22 3°Υ′54'05 0°-30'-40 conjunction -4277 Jul 13 j 09:23 3°¥26'37 -4269 Apr 29 j 16:22 3°**Υ**54'05 0°30'40 retrograde minimum elong -4277 Sep 27 j 01:17 1°**¥**25'42 0°-52'-7 -4269 Apr 28 j 20:08 3°**Υ**51'04 19.99732 AU max. Earth dist. opposition -4269 Aug 17 j 14:58 -4277 Sep 27 j 02:39 1°**升**25'33 18.50015 AU 8°Y09'36 min. Earth dist. retrograde -4269 Oct 30 j 22:27 -4277 Nov 03 j 19:21 30°R≈ 6°Υ07'45 0°-32'-21 opposition 6°**Υ**05'55 17.96334 AU -4277 Dec 10 j 15:15 29°≈25'50 -4269 Oct 31 j 15:28 direct min. Earth dist. 0°**)**€ -4276 Jan 16 j 00:54 -4268 Jan 14 j 01:17 4°Υ04'34 direct -4268 May 03 j 14:47 8°**Υ**'21'34 0°-27'-32 -4276 Mar 27 j 23:48 3°**升**30'39 0°-46'-23 conjunction conjunction 8° **Y**21'34 0° 27'32 -4276 Mar 27 j 23:48 3°**¥**30'39 0°46'29 -4268 May 03 j 14:47 minimum elong minimum elong -4276 Mar 27 j 19:43 3°**₭**30'03 20.46980 AU -4268 May 02 j 16:33 8°**Υ**18'15 19.92975 AU max. Earth dist. max. Earth dist. 7°**)** 40′45 -4276 Jul 16 j 22:19 -4268 Aug 21 j 08:08 12°**Υ**37'51 retrograde retrograde opposition -4276 Sep 30 j 10:50 5°**¥**39'46 0°-50'-37 opposition -4268 Nov 03 j 13:18 10°**Υ**35'54 0°-28'-46 min. Earth dist. -4276 Sep 30 j 15:08 5°**升**39'19 18.43887 AU min. Earth dist. -4268 Nov 04 j 08:38 10°**Υ**33'48 17.89693 AU direct -4276 Dec 14 j 00:18 3°**)**€39'34 direct -4267 Jan 17 j 16:53 8°**Y**32'19 -4275 Apr 01 j 16:52 7°**)**(45'50 0°-44'-53 -4267 May 08 j 13:45 12°**Υ**'50'52 0°-24'-12 conjunction conjunction -4275 Apr 01 j 16:52 7°**)**(45'50 0°45'00 -4267 May 08 j 13:45 12°**Υ**50'52 0°24'11 minimum elong minimum elong -4275 Apr 01 j 11:16 7°**)** 45′01 20.40724 AU max. Earth dist. -4267 May 07 j 14:04 12°**Υ**47'18 19.86456 AU max. Earth dist. -4267 Aug 26 j 04:50 17°**Υ**07'54 retrograde retrograde -4275 Oct 04 i 20:54 9°\;\;\;55'39 0°-48'-50 -4267 Nov 08 i 04:45 15°**Υ**05'52 0°-24'-59 opposition opposition -4267 Nov 09 j 00:21 15°**Υ**'03'44 17.83302 AU min. Earth dist. -4275 Oct 05 i 02:34 9°**)** 55'03 18.37497 AU min. Earth dist. direct -4275 Dec 18 i 12:33 7°**¥**55′05 direct -4266 Jan 22 j 11:40 13° Υ01'55 -4274 Apr 06 j 10:50 12° \(\text{ } 02'49 \) 0°-43'-8 -4266 May 13 j 13:38 17°**Υ**'22'01 0°-20'-42 conjunction conjunction minimum elong -4274 Apr 06 i 10:50 12°\mathbf{H}\02'49 0°43'12 -4266 May 13 j 13:38 17° Υ 22'01 0° 20'40 minimum elong -4274 Apr 06 j 01:30 12° \(\) 01'28 20.34211 AU max. Earth dist. -4266 May 12 j 12:35 17°**Υ**18'14 19.80197 AU max. Earth dist. -4274 Jul 26 j 03:44 16° **)** 14'30 retrograde -4266 Aug 30 j 23:18 21°**Υ**'39'46 retrograde -4266 Nov 12 j 21:05 19°**Υ**'37'42 0°-21'-1 -4274 Oct 09 j 07:36 14° ** 13'19 0°-46'-45 opposition opposition -4266 Nov 13 j 18:50 19°**Υ**35'20 17.77198 AU min. Earth dist. -4274 Oct 09 j 16:21 14° ** 12'24 18.30873 AU min. Earth dist. -4265 Jan 27 j 04:27 17° Υ 33'25 direct -4274 Dec 22 j 23:23 12° **∺** 12'20 direct max. Earth dist. -4265 May 17 j 11:25 21°**Υ**50'59 19.74254 AU -4273 Apr 11 j 05:47 16° **★**21'36 0°-41'-7 conjunction -4273 Apr 11 j 05:47 16° **★**21'36 0°41'11 -4265 May 18 j 14:07 21° Υ 55'03 0°-17'-4 minimum elong conjunction -4273 Apr 10 j 18:43 16° **★** 19'58 20.27484 AU -4265 May 18 j 14:07 21°**Υ**55'03 0°17'02 max. Earth dist. minimum elong -4273 Jul 30 j 20:22 20° ★ 34'03 $-4265 \text{ Sep } 04 \text{ j } 21:34 \quad 26^{\circ} \Upsilon 13'31$ retrograde retrograde opposition -4273 Oct 13 j 18:52 18° ¥ 32'45 0°-44'-23 opposition -4265 Nov 17 j 14:13 24°**Υ**11'26 0°-16'-53 min. Earth dist. -4273 Oct 14 j 04:50 18° ★31'41 18.24048 AU min. Earth dist. -4265 Nov 18 j 12:12 24°**Υ**09'03 17.71408 AU direct -4273 Dec 27 j 13:28 16° ★ 31'21 direct -4264 Feb 01 j 00:42 22°**Y**06'53 max. Earth dist. -4272 Apr 14 j 10:49 20° **★** 40'00 20.20585 AU max. Earth dist. -4264 May 21 j 11:49 26°**Υ**25'48 19.68607 AU -4272 Apr 15 j 01:14 20° ¥42'07 0°-38'-51 -4264 May 22 j 15:10 26°**Υ**29'58 0°-13'-17 conjunction conjunction

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4264 in astronomical counting style is the year 4265 BCE in historical counting style. $-4264 \text{ May } 22 \text{ j } 15:10 \quad 26^{\circ} \Upsilon^2 29'58 \quad 0^{\circ} 13'13$ behind sun end -4258 Jun 21 j 12:43 24°**8**33'44 minimum elong -4264 May 22 j 11:21 26°**Υ**29'24 retrograde -4258 Oct 07 j 07:22 28°854'57 behind sun begin -4258 Dec 19 j 13:38 26°**8**52'48 0°14'17 -4264 May 22 j 19:00 26° Υ30'32 behind sun end opposition -4258 Dec 20 j 17:37 26°849'45 17.39399 AU -4264 Jul 27 j 20:13 0°X min. Earth dist. -4257 Mar 05 j 18:36 24°**8**46'32 -4264 Sep 08 j 17:26 0°849'07 retrograde direct -4264 Oct 22 j 09:40 -4257 Jun 25 j 01:56 29°**8**12'12 19.37766 AU 30°**₹**Υ max. Earth dist. -4264 Nov 21 j 08:22 28°**Y**′47'04 0°-12'-37 opposition -4257 Jun 26 j 11:08 29°**8**17'23 -4264 Nov 22 j 08:17 28°**Y**44'27 17.65921 AU min. Earth dist. conjunction 0°14'50 26°**Y**42'14 -4257 Jun 26 j 11:08 29°**8**17'23 direct -4263 Feb 04 j 19:26 minimum elong 0°15'00 -4257 Jun 26 j 08:51 29°**8**17'03 -4263 May 09 j 08:25 0°8 behind sun begin max. Earth dist. -4263 May 26 j 11:34 1°**8**02'16 19.63272 AU behind sun end -4257 Jun 26 j 13:24 29°**8**17'44 -4257 Jul 07 j 20:31 $0^{\circ}\Pi$ 1°806'45 0°-9'-24 -4257 Oct 12 j 06:22 conjunction -4263 May 27 j 16:49 retrograde 3°**Ⅱ**39'37 minimum elong -4263 May 27 j 16:49 1°**8**06'45 0°09'20 opposition -4257 Dec 24 j 13:00 1°**Ⅲ**37'26 0°18'39 behind sun begin -4263 May 27 j 11:10 1°**8**05'54 min. Earth dist. -4257 Dec 25 j 17:03 1°**Д**34'22 17.36347 AU behind sun end -4263 May 27 j 22:28 1°807'35 -4256 Feb 05 j 02:53 30°R₩ retrograde -4263 Sep 13 j 16:16 5°**8**26'32 direct -4256 Mar 09 j 20:52 29°830'57 opposition -4263 Nov 26 j 03:05 3°**8**24'29 0°-8'-14 -4256 Apr 12 j 04:04 $\Pi^{\circ}0$ min. Earth dist. -4263 Nov 27 j 03:24 3°**8**21'50 17.60734 AU max. Earth dist. -4256 Jun 29 j 06:42 3°**Д**57'29 19.34970 AU direct -4262 Feb 09 j 17:29 1°819'24 conjunction -4256 Jun 30 j 14:25 4°**Ⅱ**02'27 0°18'42 conjunction -4262 Jun 01 j 19:13 5°**8**45'15 0°-5'-26 minimum elong -4256 Jun 30 i 14:25 4°**Ⅱ**02'27 0°18'53 minimum elong -4262 Jun 01 j 19:13 5°**8**45'15 0°05'21 retrograde -4256 Oct 16 i 06:11 8°**Ⅲ**24'51 behind sun begin -4262 Jun 01 j 12:41 5°**8**44'16 opposition -4256 Dec 28 i 12:53 6°**Ⅲ**22'39 0°22'55 behind sun end -4262 Jun 02 i 01:46 5°**8**46'14 min. Earth dist. -4256 Dec 29 j 16:20 6°**Д**19'39 17.33819 AU max. Earth dist. -4262 May 31 j 13:40 5°**8**40'43 19.58212 AU direct -4255 Mar 15 i 00:09 4°**Ⅱ**16'01 -4262 Sep 18 j 12:59 10°805'36 max. Earth dist. -4255 Jul 04 j 09:43 8°**Д**42'59 19.32730 AU retrograde -4262 Nov 30 j 22:58 8°803'34 0°-3'-45 opposition -4262 Dec 02 j 00:58 8°**8**00'43 17.55816 AU -4255 Jul 05 j 17:37 8°II48'00 0°22'27 min. Earth dist. conjunction -4255 Jul 05 j 17:37 -4261 Feb 14 j 14:49 5°**8**58'14 8°**Ⅱ**48′00 direct minimum elong 0°22'37 -4255 Oct 21 j 05:19 13° II 10'31 retrograde opposition -4254 Jan 02 j 13:10 11°**Ц**08'18 0°27'01 conjunction -4261 Jun 06 j 21:51 10°**8**25'19 -4254 Jan 03 j 16:35 11°**Ц**05'19 17.31893 AU 0°01'15 min. Earth dist. minimum elong -4261 Jun 06 j 15:05 10°824'18 -4254 Mar 20 j 02:36 9°**Д**01'34 behind sun begin direct -4261 Jun 07 j 04:37 10°826'20 behind sun end -4254 Jul 10 j 20:45 13°**Д**33'56 0°26'02 max. Earth dist. conjunction -4261 Sep 23 j 11:56 14°846'11 -4254 Jul 10 j 20:44 13°**II**33'56 0°26'14 retrograde minimum elong -4261 Oct 06 j 08:50 14°**8**41'33 asc. node max. Earth dist. -4254 Jul 09 j 14:28 13°**Д**29'10 19.31116 AU -4254 Oct 26 ј 06:00 17°**Ц**56'30 opposition -4261 Dec 05 j 19:32 12°844'07 0°00'45 retrograde min. Earth dist. -4261 Dec 06 j 21:50 12°841'15 17.51194 AU opposition -4253 Jan 07 j 14:06 15°**Ц**54'20 0°30'56 direct min. Earth dist. -4253 Jan 08 j 16:01 15°**Ц**51'31 17.30595 AU -4260 Jun 09 j 05:24 15°8 -4253 Mar 25 j 06:18 13°**Д**47'34 direct max. Earth dist. -4260 Jun 09 j 17:43 15°**8**01'55 19.48959 AU -4253 Jul 15 j 23:28 18°**Д**20'10 0°29'27 conjunction -4260 Jun 11 j 01:01 15°**8**06'45 0°02'48 -4253 Jul 15 j 23:28 18°**Д**20'10 0°29'38 conjunction minimum elong -4260 Jun 11 j 01:00 15°**8**06'45 -4253 Jul 14 j 17:58 18°**Д**15'31 19.30146 AU minimum elong max. Earth dist. -4260 Jun 10 j 18:15 15°**8**05'44 -4253 Oct 31 i 05:49 22° **II** 42'44 behind sun begin retrograde -4260 Jun 11 i 07:44 15°**8**07'46 behind sun end opposition -4252 Jan 12 j 15:32 20°**I**I40'39 0°34'39 -4260 Sep 27 i 09:38 19°828'04 retrograde min. Earth dist. -4252 Jan 13 i 17:08 20°**II**37'52 17.29969 AU opposition -4260 Dec 09 i 16:56 17°\(\colon\)25'59 0°05'17 direct -4252 Mar 29 j 08:53 18°**Д**33'54 min. Earth dist. -4260 Dec 10 j 20:19 17°**8**22'59 17.46883 AU max. Earth dist. -4252 Jul 18 j 22:06 23°**Д**02'13 19.29859 AU direct -4259 Feb 23 j 15:00 15°820'09 max. Earth dist. -4259 Jun 14 j 19:09 19°844'14 19.44826 AU -4252 Jul 20 j 01:59 23°Д06'38 0°32'41 conjunction -4252 Jul 20 j 01:59 23°**Д**06'37 minimum elong 0°32'52 -4259 Jun 16 j 04:10 19°**8**49'22 0°06'52 conjunction retrograde -4252 Nov 04 j 06:53 27°**Д**29'08 minimum elong -4259 Jun 16 j 04:09 19°**8**49'22 0°07'01 opposition -4251 Jan 16 j 17:08 25°**Ⅲ**27'10 0°38'08 behind sun begin -4259 Jun 15 j 21:55 19°848'25 min. Earth dist. -4251 Jan 17 j 16:43 25°**Ц**24'36 17.29998 AU -4259 Jun 16 j 10:24 19°**8**50'18 direct -4251 Apr 03 j 12:41 23°**Д**20'32 behind sun end -4259 Oct 02 j 08:30 24°811'04 -4251 Jul 24 j 01:52 27°**Д**49'04 19.30206 AU retrograde max. Earth dist. -4259 Dec 14 j 14:57 22°808'56 0°09'49 opposition -4259 Dec 15 j 18:36 22°**8**05'55 -4251 Jul 25 j 04:13 27°**I**53'14 0°35'41 min. Earth dist. 17.42941 AU conjunction direct -4258 Feb 28 j 16:33 20°802'52 minimum elong -4251 Jul 25 j 04:13 27°**I**53'14 0°35'53 max. Earth dist. -4258 Jun 19 j 23:34 24°**8**27'58 19.41075 AU -4251 Aug 28 j 21:07 0 \circ \odot retrograde -4251 Nov 09 j 06:50 2°915'38 conjunction -4258 Jun 21 j 07:43 24°\(232'58\) 0°10'53 opposition -4250 Jan 21 j 19:20 0°**≤**13'47 0°41'21 -4258 Jun 21 j 07:43 24°**8**32'58 0°11'02 min. Earth dist. -4250 Jan 22 j 18:39 0°5511'16 17.30654 AU minimum elong

-4250 Jan 27 j 03:01 30°R II

behind sun begin

-4258 Jun 21 j 02:42 24°832'13

-	omena of Uranus Ir			· //		, 1	age 11
	nical year style is used: Tl		in astronomical co				
direct	-4250 Apr 08 j 15:35			min. Earth dist.	-4242 Mar 02 j 02:03		17.53238 AU
The state of	-4250 Jun 15 j 07:24	0.20 0.20	10.211.60 177	direct	-4242 May 17 j 23:42	6° Ω 02'06	
max. Earth dist.	-4250 Jul 29 j 04:56	2°€35'52	19.31160 AU				
				conjunction	-4242 Sep 05 j 22:41		0°49'44
conjunction	-4250 Jul 30 j 05:59	2°539'50		minimum elong	-4242 Sep 05 j 22:41	10°Ω28'00	0°49'54
minimum elong	-4250 Jul 30 j 05:59	2°939'50	0°38'38	max. Earth dist.	-4242 Sep 05 j 13:06		19.55520 AU
retrograde	-4250 Nov 14 j 07:47	7°502'04		retrograde	-4242 Dec 21 j 20:55		
opposition	-4249 Jan 26 j 21:43	5°900'22		opposition	-4241 Mar 06 j 18:14		
min. Earth dist.	-4249 Jan 27 j 18:44		17.31880 AU	min. Earth dist.	-4241 Mar 07 j 01:18		17.57945 AU
direct	-4249 Apr 13 j 20:28	2°954'04		direct	-4241 May 23 j 01:38		
max. Earth dist.	-4249 Aug 03 j 08:35	22'40ف ⁷ °	19.32654 AU		-4241 Sep 09 j 07:40	15°62	
. ,.	1010 1 01:07.00	70 6 04117	0040156		4241.0 10:10.12	1.50 005105	0040141
conjunction	-4249 Aug 04 j 07:28	7°926'17	0°40'56	conjunction	-4241 Sep 10 j 18:12		0°49'41
minimum elong	-4249 Aug 04 j 07:28	7°526'17	0°41'08	minimum elong	-4241 Sep 10 j 18:12		0°49'51
retrograde	-4249 Nov 19 j 07:03	11°548'16	0046154	max. Earth dist.	-4241 Sep 10 j 12:14		19.60445 AU
opposition	-4248 Feb 01 j 00:32	9°546'42		retrograde	-4241 Dec 26 j 17:47		0055111
min. Earth dist.	-4248 Feb 01 j 21:12		17.33637 AU	opposition	-4240 Mar 10 j 19:33		
direct	-4248 Apr 18 j 00:25	7°940'37	10.24660 444	min. Earth dist.	-4240 Mar 11 j 00:09		17.63080 AU
max. Earth dist.	-4248 Aug 07 j 10:16	8752 فاقت 12	19.34660 AU	direct	-4240 May 27 j 03:15	15°8617'57	
conjunction	-4248 Aug 08 j 08:10	1200612120	0°43'08	conjunction	-4240 Sep 14 j 12:39	19° Ω /1'06	0°49'20
minimum elong	-4248 Aug 08 j 08:10	12°S12'20	0°43'20	minimum elong	-4240 Sep 14 j 12:39		0°49'27
retrograde	-4248 Nov 23 j 07:07	16°934'00	0 43 20	max. Earth dist.	-4240 Sep 14 j 08:24		
opposition	-4247 Feb 05 i 03:18	14°932'33	0°49'12	retrograde	-4240 Dec 30 j 13:53		19.03802 AU
min. Earth dist.	-4247 Feb 05 j 21:28			opposition	-4239 Mar 15 j 20:24		0°54'35
direct	-4247 Apr 23 j 05:49		17.33007 AC	min. Earth dist.	-4239 Mar 15 j 20:24		
direct	-424/ Apr 23 J 03.49	12 3920 41		direct	-4239 Jun 01 j 03:13		17.08031 AU
conjunction	-4247 Aug 13 j 08:35	1600057146	0°45'03	uncet	-4239 Juli 01 J 03.13	19 063321	
minimum elong	-4247 Aug 13 j 08:35			conjunction	-4239 Sep 19 j 06:24	240 0 15104	0°48'40
max. Earth dist.	-4247 Aug 13 j 08:33			minimum elong	-4239 Sep 19 j 06:24		0°48'48
retrograde	-4247 Nov 28 j 05:38	21°S19'02	19.3/111 AU	max. Earth dist.	-4239 Sep 19 j 05:35		
opposition	-4246 Feb 10 j 06:12	19°917'42	0°51'09	retrograde	-4238 Jan 04 j 10:13	28°Ω31'13	19./13/4 AU
min. Earth dist.	-4246 Feb 10 j 23:48		17.38533 AU	opposition	-4238 Mar 20 j 20:41		0°53'40
direct	-4246 Apr 28 j 10:03		17.36333 AC	min. Earth dist.	-4238 Mar 20 j 20:02		
direct	-4240 Apr 20 j 10.03	17 312 04		direct	-4238 Jun 06 j 03:59		17.74376 AC
conjunction	-4246 Aug 18 j 08:11	21° © 42'22	0°46'38		.250 van 00 j 05.57	2.002702	
minimum elong	-4246 Aug 18 j 08:11		0°46'50	conjunction	-4238 Sep 23 j 23:13	28° Ω 47'22	0°47'42
max. Earth dist.	-4246 Aug 17 j 13:43			minimum elong	-4238 Sep 23 j 23:13		0°47'48
retrograde	-4246 Dec 03 j 05:06	26°503'10	17.57771110	max. Earth dist.	-4238 Sep 24 j 00:21		19.77704 AU
opposition	-4245 Feb 15 j 09:04	24°901'54	0°52'44	man. Bartir dist.	-4238 Oct 13 j 15:50	0° m)	19.7770.110
min. Earth dist.	-4245 Feb 16 j 00:04		17.41614 AU	retrograde	-4237 Jan 09 j 04:46	3° m/02'48	
direct	-4245 May 03 j 14:59			opposition	-4237 Mar 25 j 20:36	1° mp 02'08	0°52'24
				min. Earth dist.	-4237 Mar 25 j 17:57		17.80894 AU
conjunction	-4245 Aug 23 j 07:06	26°525'53	0°47'54		-4237 Apr 20 j 23:58	30°R Ω	
minimum elong	-4245 Aug 23 j 07:05	26°\$25'53	0°48'04	direct	-4237 Jun 11 j 02:06	28° Ω 59'19	
max. Earth dist.	-4245 Aug 22 j 15:43		19.43272 AU		-4237 Jul 30 j 01:07	0° m)	
	-4245 Oct 28 j 03:02	$0^{\circ}\Omega$					
retrograde	-4245 Dec 08 j 02:59	0° Ω 46'09		conjunction	-4237 Sep 28 j 15:13	3°m/18'02	0°46'27
S	-4244 Jan 19 j 18:25	30° ₹©		minimum elong	-4237 Sep 28 j 15:13	3° m/ 18'02	0°46'33
opposition	-4244 Feb 20 j 11:54	28°5944'58	0°53'58	max. Earth dist.	-4237 Sep 28 j 19:28	3°m)18'41	19.84142 AU
min. Earth dist.	-4244 Feb 21 j 01:47		17.45086 AU	retrograde	-4236 Jan 14 j 00:36	7° m 32'42	
direct	-4244 May 07 j 18:11	26°539'47		opposition	-4236 Mar 29 j 19:49	5° m/32'13	0°50'50
	-4244 Aug 09 j 01:11	$0^{\circ}\Omega$		min. Earth dist.	-4236 Mar 29 j 14:13		17.87435 AU
				direct	-4236 Jun 15 j 01:43	3°m/29'52	
conjunction	-4244 Aug 27 j 05:09	1° Ω 08'07	0°48'51		-		
minimum elong	-4244 Aug 27 j 05:09	1° Ω 08'07	0°49'02	conjunction	-4236 Oct 02 j 06:29	7° m 47'03	0°44'55
max. Earth dist.	-4244 Aug 26 j 14:46		19.46952 AU	minimum elong	-4236 Oct 02 j 06:29	7° m 47'03	0°45'00
retrograde	-4244 Dec 12 j 01:49	5° Ω 27'47		max. Earth dist.	-4236 Oct 02 j 12:38	7° ™ 48'00	19.90781 AU
opposition	-4243 Feb 24 j 14:10	3° £ 26′39	0°54'49	retrograde	-4235 Jan 17 j 17:29	12° m 00'59	
min. Earth dist.	-4243 Feb 25 j 01:34		17.48965 AU	opposition	-4235 Apr 03 j 18:23	10° My $00'38$	0°48'58
direct	-4243 May 12 j 21:30	1° Ω 21'41		min. Earth dist.	-4235 Apr 03 j 11:26	10° My $01'21$	17.94159 AU
				direct	-4235 Jun 19 j 22:02	7° m 58'45	
conjunction	-4243 Sep 01 j 02:31	5° Ω 48'53	0°49'27				
minimum elong	-4243 Sep 01 j 02:31	5° Ω 48'53	0°49'37	conjunction	-4235 Oct 06 j 21:04	12° m) 14'24	0°43'07
max. Earth dist.	-4243 Aug 31 j 15:29		19.51032 AU	minimum elong	-4235 Oct 06 j 21:04	12° m 14'24	0°43'11
retrograde	-4243 Dec 16 j 23:15	10° Ω 07'53		max. Earth dist.	-4235 Oct 07 j 05:42		19.97565 AU
opposition	-4242 Mar 01 j 16:24	8° Ω 06'48	0°55'18	retrograde	-4234 Jan 22 j 12:05	16° Mp 27′34	

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4234 in astronomical counting style is the year 4235 BCE in historical counting style. -4234 Apr 08 j 16:25 14° m 27'22 0°46'48 opposition -4226 May 14 j 21:08 18° **2**54'46 0°21'49 opposition min. Earth dist. -4234 Apr 08 j 06:30 14° mp 28'23 18.00972 AU min. Earth dist. -4226 May 13 j 21:28 18° **2**57'09 18.52936 AU -4234 Jun 24 j 20:27 12° m 25'57 -4226 Jul 30 j 09:52 16°**♀**56'11 direct direct -4234 Oct 11 j 10:44 16° mp 40'02 0°41'04 -4226 Nov 13 j 22:18 20°**£**58'12 0°18'04 conjunction conjunction -4234 Oct 11 j 10:45 16° m 40'02 0°41'08 -4226 Nov 13 j 22:18 20°**£**58'12 0°18'00 minimum elong minimum elong -4234 Oct 11 j 21:19 16° m/41'39 -4226 Nov 14 j 22:57 21°**Ω**01'52 20.55935 AU max. Earth dist. 20.04393 AU max. Earth dist. -4233 Jan 27 j 03:34 20° M 52'28 -4225 Mar 02 j 18:05 25°**♀**04'43 retrograde retrograde opposition -4233 Apr 13 j 13:56 18° M 52'23 0°44'23 opposition -4225 May 19 j 12:11 23°**♀**04'58 0°18'05 min. Earth dist. -4233 Apr 13 j 03:00 18° M 53'30 18.07812 AU min. Earth dist. -4225 May 18 j 12:01 23°**♀**07'25 18.58937 AU direct -4233 Jun 29 j 15:13 16° m 51'25 direct -4225 Aug 03 j 21:32 21°**£**06'43 -4233 Oct 15 j 23:50 21° m 03'55 0°38'47 -4225 Nov 18 j 05:57 25°**♀**07'28 0°14'40 conjunction conjunction minimum elong -4233 Oct 15 j 23:50 21° m 03'55 0°38'49 minimum elong -4225 Nov 18 j 05:56 25°**£**07'28 0°14'36 max. Earth dist. -4233 Oct 16 j 12:20 21° m 05'49 20.11219 AU behind sun begin -4225 Nov 18 j 02:58 25°**£**07'02 retrograde -4232 Jan 31 j 20:45 25° Mp 15'34 behind sun end -4225 Nov 18 j 08:55 25°**♀**07'54 opposition -4232 Apr 17 j 10:24 23° Mp 15'36 0°41'42 max. Earth dist. -4225 Nov 19 j 07:22 25°**£**11'14 20.61870 AU min. Earth dist. -4232 Apr 16 j 20:39 23° M 17'00 18.14602 AU retrograde -4224 Mar 06 j 07:07 29°**2**13'22 direct -4232 Jul 03 j 11:28 21° mp 15'02 min. Earth dist. -4224 May 21 j 23:54 27° **2**16'20 18.64789 AU opposition -4224 May 23 j 02:09 27°**2**13'42 conjunction -4232 Oct 19 j 12:09 25° m 25'58 0°36'18 direct -4224 Aug 07 j 10:17 25° **2**15'46 minimum elong -4232 Oct 19 j 12:10 25° m 25'58 0°36'20 max. Earth dist. -4232 Oct 20 j 02:27 25° m 28'08 20.17957 AU conjunction -4224 Nov 21 i 13:10 29°**2**15'21 0°11'13 retrograde -4231 Feb 04 i 10:48 29° m 36'51 minimum elong -4224 Nov 21 i 13:10 29°**2**15'21 0°11'08 opposition -4231 Apr 22 i 06:21 27° m 36'57 0°38'48 behind sun begin -4224 Nov 21 j 08:14 29°**£**14'38 min. Earth dist. -4231 Apr 21 j 15:56 27° mp 38'25 18.21292 AU behind sun end -4224 Nov 21 j 18:05 29°**£**16'03 -4231 Jul 08 j 04:40 25° m 36'46 max. Earth dist. -4224 Nov 22 j 16:29 29°**2**19'22 20.67614 AU direct -4224 Dec 04 j 05:19 oom. -4231 Oct 23 j 23:36 29° mp 46'08 0°33'37 retrograde -4223 Mar 10 j 17:18 3°M20'41 conjunction -4231 Oct 23 j 23:36 29° m 46'08 0°33'37 -4223 May 27 j 15:42 1°M21'06 0°10'24 minimum elong opposition max. Earth dist. -4231 Oct 24 j 15:27 29° mp 48'32 20.24587 AU min. Earth dist. -4223 May 26 j 13:17 1°M23'46 18.70427 AU -4231 Oct 27 j 19:02 0°**♀** -4223 Jul 03 j 18:08 30°R € -4223 Aug 11 j 20:20 29°**£**23'31 -4230 Feb 09 j 02:31 retrograde 3°**£**56'14 direct -4223 Sep 18 j 18:25 -4230 Apr 26 j 08:10 1°**2**58'08 18.27850 AU min. Earth dist. 0°M -4230 Apr 27 j 01:21 1°**£**56'23 0°35'43 opposition -4223 Nov 25 j 19:49 -4230 Jul 01 j 06:07 30°R M 3°M21'58 0°07'43 conjunction -4230 Jul 12 j 22:43 29° m 56'33 -4223 Nov 25 j 19:49 direct minimum elong 3°M21'58 0°07'38 -4230 Jul 24 j 11:11 0∘**⊽** behind sun begin -4223 Nov 25 j 13:53 3°M21'07 behind sun end -4223 Nov 26 j 01:46 3°M22'49 conjunction -4230 Oct 28 j 10:22 4°**2**04'21 0°30'45 max. Earth dist. -4223 Nov 26 j 23:35 3°M26'02 20.73133 AU minimum elong -4230 Oct 28 j 10:23 4°**2**04'21 0°30'46 retrograde -4222 Mar 15 j 05:11 7°M26'49 max. Earth dist. -4230 Oct 29 j 04:12 4°**2**07'02 20.31077 AU min. Earth dist. -4222 May 31 j 00:29 5°M30'07 18.75809 AU retrograde -4229 Feb 13 j 15:23 8°**£**13'41 -4222 Jun 01 j 04:33 5°M27'18 0°06'29 opposition -4229 May 01 j 19:41 6°**2**13'51 0°32'26 direct -4222 Aug 16 j 07:46 3° M $_{3}0'01$ opposition min. Earth dist. -4229 May 01 j 01:55 6°**2**15'39 18.34285 AU -4229 Jul 17 j 14:07 -4222 Nov 30 j 02:26 7°M27'27 0°04'12 direct 4°**£**14'20 conjunction -4222 Nov 30 i 02:25 minimum elong 7°M27'27 0°04'06 -4229 Nov 01 j 20:18 -4222 Nov 29 i 19:57 conjunction 8°**♀**20'36 0°27'45 behind sun begin 7°M26'32 minimum elong -4229 Nov 01 i 20:18 8°**♀**20'36 0°27'44 behind sun end -4222 Nov 30 j 08:52 7°M28'22 max. Earth dist. -4229 Nov 02 i 15:31 8°**2**3'29 20.37456 AU max. Earth dist. -4222 Dec 01 i 07:46 7°ML31'45 20.78350 AU retrograde -4228 Feb 18 j 06:01 12° **2**29'11 retrograde -4221 Mar 19 i 14:58 11° ML31'51 opposition opposition -4228 May 05 j 12:58 10° 29'21 0°29'01 -4221 Jun 05 j 16:45 9°MJ32'25 0°02'34 min. Earth dist. -4228 May 04 j 16:30 10° **2**31'25 18.40603 AU min. Earth dist. -4221 Jun 04 j 12:55 9°M35'12 18.80861 AU -4228 Jul 21 j 06:07 8°₽30'08 direct direct -4221 Aug 20 j 16:53 7°M35'26 conjunction -4228 Nov 05 j 05:37 12°**2**34'55 0°24'38 conjunction -4221 Dec 04 j 08:42 11°M31'54 0°00'36 minimum elong -4228 Nov 05 j 05:37 12°**2**34'55 0°24'35 minimum elong -4221 Dec 04 j 08:42 11°M31'54 0°00'29 -4228 Nov 06 j 02:56 12°**2**38'07 20.43709 AU behind sun begin -4221 Dec 04 j 02:11 11°ML30'58 max. Earth dist. retrograde -4227 Feb 21 j 17:25 16° **2**42'46 behind sun end -4221 Dec 04 j 15:14 11°M32'49 min. Earth dist. -4227 May 09 j 08:24 14°**Ω**45'04 18.46814 AU max. Earth dist. -4221 Dec 05 j 13:52 11°M 36'09 20.83219 AU desc. node opposition -4227 May 10 j 05:27 14°**£**42'57 0°25'29 -4220 Feb 04 j 01:28 14°M 40'52 direct -4227 Jul 25 j 19:40 12°**-**244'03 -4220 Feb 13 j 12:51 15°ML retrograde -4220 Mar 23 j 01:59 15°M 35'52 conjunction -4227 Nov 09 j 14:16 16°**2**47'25 0°21'24 -4220 May 01 j 15:09 15°RML minimum elong -4227 Nov 09 j 14:16 16°**£**47'25 0°21'21 min. Earth dist. -4220 Jun 07 j 23:27 13°M 39'24 18.85529 AU

opposition

direct

-4220 Jun 09 j 04:18 13°M 36'31

-4220 Aug 24 j 02:31 11°M39'46

max. Earth dist.

retrograde

-4227 Nov 10 j 12:45 16°**2**50'46 20.49878 AU

-4226 Feb 26 j 07:29 20°**♀**54'33

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 13 Attention, astronomical year style is used: The year -4220 in astronomical counting style is the year 4221 BCE in historical counting style.

-4220 Nov 27 j 11:02 15°ML direct -4213 Sep 22 j 05:32 9°×44'21 -4220 Dec 07 j 14:50 15°M35'23 0°-3'00 conjunction -4212 Jan 05 i 05:46 13° ₹ 36'05 0°-25'-57 conjunction -4220 Dec 07 j 14:51 15°M35'23 0°03'09 -4212 Jan 05 j 05:45 13°**₹** 36'05 0°26'08 minimum elong minimum elong -4220 Dec 07 j 08:19 15°M34'27 -4212 Jan 06 j 10:40 13° ₹ 40'13 21.05591 AU behind sun begin max. Earth dist. -4220 Dec 07 j 21:22 15°M36'18 -4212 Apr 24 j 23:21 17° ₹38'04 behind sun end retrograde -4212 Jul 11 j 01:03 15° ₹ 41'11 19.06163 AU max. Earth dist. -4220 Dec 08 j 21:07 15°M 39'47 20.87651 AU min. Earth dist. -4212 Jul 12 j 04:17 15°**尽** 38'27 0°-30'-19 retrograde -4219 Mar 27 j 11:02 19°M 38'58 opposition -4212 Sep 25 j 10:46 13° ₹ 42'21 min. Earth dist. -4219 Jun 12 j 10:56 17°ML42'29 18.89733 AU direct opposition -4219 Jun 13 j 15:18 17°M 39'39 0°-5'-14 direct -4219 Aug 28 j 11:08 15°M-43'08 conjunction -4211 Jan 08 j 11:13 17° **₹** 33'54 0°-28'-49 -4211 Jan 08 j 11:13 17° **₹** 33'54 0°29'01 minimum elong -4219 Dec 11 j 20:46 19°M237'56 0°-6'-30 -4211 Jan 09 j 16:42 17° ₹ 38'07 21.06543 AU conjunction max. Earth dist. -4219 Dec 11 j 20:47 19° M 37'56 minimum elong 0°06'40 retrograde -4211 Apr 29 j 05:45 21° ₹35'52 behind sun begin -4219 Dec 11 j 14:38 19° M 37'04 min. Earth dist. -4211 Jul 15 j 08:42 19°**х** 38'54 19.06934 AU behind sun end -4219 Dec 12 j 02:56 19°M 38'48 opposition -4211 Jul 16 j 11:13 19° **₹** 36'14 0°-33'-24 max. Earth dist. -4219 Dec 13 j 02:22 19°ML42'13 20.91622 AU direct -4211 Sep 29 j 15:47 17°**х** 40'09 retrograde -4218 Mar 31 j 21:17 23°M41'11 min. Earth dist. -4218 Jun 16 j 20:47 21°ML44'45 18.93460 AU conjunction -4210 Jan 12 j 16:51 21° ₹ 31'37 opposition -4218 Jun 18 j 01:44 21°M-41'52 minimum elong -4210 Jan 12 j 16:51 21° **₹** 31'37 direct -4218 Sep 01 j 19:17 19°ML45'30 max. Earth dist. -4210 Jan 13 j 20:56 21° ₹35'38 21.07144 AU retrograde -4210 May 03 j 14:40 25° ₹33'39 conjunction -4218 Dec 16 j 02:36 23°MJ39'35 0°-9'-56 opposition -4210 Jul 20 i 17:54 23° ₹34'00 0°-36'-20 minimum elong -4218 Dec 16 j 02:36 23°M 39'35 0°10'06 min. Earth dist. -4210 Jul 19 i 15:53 23° ₹36'37 19.07351 AU behind sun begin -4218 Dec 15 j 21:17 23°M 38'50 direct -4210 Oct 03 j 20:19 21° ₹37'55 -4218 Dec 16 j 07:54 23° 11.40'19 behind sun end max. Earth dist. -4218 Dec 17 j 08:59 23°ML43'58 20.95085 AU -4209 Jan 16 j 22:53 25° ₹729'26 0°-34'-7 conjunction -4217 Apr 05 j 05:36 27° ML42'30 -4209 Jan 16 j 22:53 25° **₹** 29'26 0°34'20 retrograde minimum elong -4217 Jun 21 j 07:19 25°ML46'00 18.96666 AU max. Earth dist. -4209 Jan 18 j 03:12 25° ₹ 33'27 21.07359 AU min. Earth dist. -4209 May 07 j 22:06 29° ₹31'33 -4217 Jun 22 j 11:37 25°ML43'10 0°-12'-53 opposition retrograde -4217 Sep 06 j 03:25 23°M 46'55 min. Earth dist. -4209 Jul 23 j 23:23 27° ₹34'25 19.07357 AU direct -4209 Jul 25 j 00:22 27°**尽** 31'54 0°-39'-6 opposition -4209 Oct 08 j 01:01 25°**√**35'49 -4217 Dec 20 j 08:15 27° ML40'21 0°-13'-19 conjunction direct -4217 Dec 20 j 08:14 27°ML40'21 0°13'30 minimum elong -4208 Jan 21 j 05:10 29° ₹27'27 0°-36'-33 -4217 Dec 20 j 04:30 27° M 39'49 behind sun begin conjunction -4208 Jan 21 j 05:09 29° ₹27'27 0°36'45 -4217 Dec 20 j 11:59 27° 11.40'52 behind sun end minimum elong -4217 Dec 21 j 13:39 27° ML44'35 20.98050 AU max. Earth dist. -4208 Jan 22 j 07:33 29° ₹31'12 21.07161 AU max. Earth dist. -4208 Jan 30 j 18:19 -4216 Feb 01 j 07:17 0°**尽** 0°궁 retrograde -4216 Apr 08 j 15:04 1°**∡**′42'59 retrograde -4208 May 11 j 06:44 3°**る**29'44 -4216 Jun 19 j 00:11 30°RM min. Earth dist. -4208 Jul 27 j 06:38 1°る32'30 19.06939 AU opposition $-4216 \text{ Jun } 25 \text{ j } 20:39 \quad 29^{\circ}\text{ML}43'35 \quad 0^{\circ}\text{-}16'\text{-}36$ opposition -4208 Jul 28 j 06:35 1°る30'05 0°-41'-41 min. Earth dist. -4216 Jun 24 j 16:10 29°M 46'26 18.99391 AU -4208 Sep 08 j 17:24 30° R 🗷 direct -4216 Sep 09 j 10:26 27°ML47'24 direct -4208 Oct 11 j 05:15 29° ₹33'57 -4216 Nov 23 j 15:17 -4208 Nov 12 j 00:50 0°る -4216 Dec 23 j 13:44 -4207 Jan 24 i 11:56 3°**ට**25'49 0°-38'-48 conjunction 1°**х** 40′16 0°-16′-38 conjunction minimum elong -4216 Dec 23 j 13:44 1°**х** 40′16 0°16′49 minimum elong -4207 Jan 24 i 11:56 3°る25'49 0°39'00 max. Earth dist. -4216 Dec 24 i 19:55 1°**х** 44'37 21.00534 AU max. Earth dist. -4207 Jan 25 i 14:07 3°る29'33 21.06504 AU retrograde -4215 Apr 12 j 22:21 5°**х** 42′39 retrograde -4207 May 15 j 14:54 7°る28'18 min. Earth dist. -4215 Jun 29 i 01:26 3°**∡**′46′00 19.01657 AU opposition -4207 Aug 01 i 12:49 5°₹28'40 0°-44'-4 opposition -4215 Jun 30 j 05:19 3°**₹**'43'12 0°-20'-12 min. Earth dist. -4207 Jul 31 i 14:11 5°る30'57 19.06034 AU direct -4215 Sep 13 j 17:33 1°**₹**47'04 direct -4207 Oct 15 j 09:48 3°₹32'29 conjunction -4215 Dec 27 j 18:56 5°**₹**39'26 0°-19'-51 conjunction -4206 Jan 28 j 18:58 7°る24'38 0°-40'-52 minimum elong -4215 Dec 27 j 18:57 5°**х** 39'26 0°20'02 minimum elong -4206 Jan 28 j 18:58 7°る24'38 0°41'05 max. Earth dist. -4215 Dec 29 j 00:14 5°**х¹**43'38 21.02601 AU max. Earth dist. -4206 Jan 29 j 18:46 7°る28'01 21.05355 AU retrograde -4214 Apr 17 j 07:42 9°**х** 41′38 retrograde -4206 May 20 j 00:04 11°る27'23 min. Earth dist. -4214 Jul 03 j 09:27 7°**х** 44′55 19.03530 AU -4206 Aug 05 j 19:03 9°**ප**27'42 0°-46'-15 opposition -4214 Jul 04 j 13:29 7°**∡**¹42'06 0°-23'-42 min. Earth dist. -4206 Aug 04 j 21:54 9°る29'50 19.04620 AU opposition -4214 Sep 17 j 23:41 5°**∡**¹45'59 direct -4206 Oct 19 j 14:24 7°**る**31'23 direct conjunction -4213 Jan 01 j 00:22 9°**х** 37'59 0°-22'-57 conjunction -4205 Feb 02 j 02:47 11°중23'57 0°-42'-44 minimum elong -4213 Jan 01 j 00:22 9°**∡**37'59 0°23'09 minimum elong -4205 Feb 02 j 02:47 11°**⋜**23'57 0°42'56 max. Earth dist. -4213 Jan 02 j 06:26 9°**∡**42'17 21.04273 AU max. Earth dist. -4205 Feb 03 j 01:51 11°る27'14 21.03658 AU retrograde -4213 Apr 21 j 14:07 13°₹40'02 retrograde -4205 May 24 j 08:32 15°る26'57 -4213 Jul 08 j 21:01 11° ₹ 40'28 0°-27'-4 -4205 Aug 09 j 05:33 13°る29'12 19.02639 AU opposition min. Earth dist. min. Earth dist. -4213 Jul 07 j 17:39 11° ₹ 43'13 19.05021 AU -4205 Aug 10 j 01:04 13°る27'13 0°-48'-13 opposition

•	nical year style is used: Tl		_	` //		, .	age 14
direct	-4205 Oct 23 j 19:03	-	iii astronomicai co	min. Earth dist.	-4197 Sep 10 j 21:48		
direct	-4203 Oct 23 j 19.03	11 03043		IIIII. Latui uist.	-4197 Sep 10 j 21:48		16.71222 AU
	-4204 Feb 06 j 10:54	150=202146	09 441 24	1:	1 3		
conjunction				direct	-4197 Nov 24 j 17:08		
minimum elong	-4204 Feb 06 j 10:54				-4196 Jan 16 j 23:34	15**	
max. Earth dist.	-4204 Feb 07 j 07:07		21.01410 AU	. ,.	410CM 10:22.02	170 4010 4	00.401.20
retrograde	-4204 May 27 j 18:03		00.401.56	conjunction	-4196 Mar 10 j 23:03		0°-49'-28
opposition	-4204 Aug 13 j 07:15			minimum elong	-4196 Mar 10 j 23:03		0°49'37
min. Earth dist.	-4204 Aug 12 j 13:28		19.00116 AU	max. Earth dist.	-4196 Mar 11 j 04:21		20.68644 AU
direct	-4204 Oct 27 j 00:09	15~030'34		retrograde	-4196 Jun 30 j 05:00		00.541.22
	4202 E 1 00 : 10 24	10070407	00 451 51	opposition	-4196 Sep 14 j 11:43		0°-54'-33
conjunction	-4203 Feb 09 j 19:24			min. Earth dist.	-4196 Sep 14 j 07:32		18.66033 AU
minimum elong	-4203 Feb 09 j 19:24			direct	-4196 Nov 27 j 23:56	1/°≈36'43	
max. Earth dist.	-4203 Feb 10 j 14:53		20.98621 AU	. ,.	4105 M 15:12 40	21057120	00 401 50
retrograde	-4203 Jun 01 j 02:51		09 511 25	conjunction	-4195 Mar 15 j 12:40		0°-48'-59
opposition	-4203 Aug 17 j 13:23			minimum elong	-4195 Mar 15 j 12:40		0°49'08
min. Earth dist.	-4203 Aug 16 j 21:08		18.97069 AU	max. Earth dist.	-4195 Mar 15 j 17:03		20.63344 AU
direct	-4203 Oct 31 j 05:24	19°030'33		retrograde	-4195 Jul 04 j 17:55		00.531.53
	4202 E 1 14 : 04 24	220 7 25101	00 471 5	opposition	-4195 Sep 18 j 19:39		
conjunction	-4202 Feb 14 j 04:24			min. Earth dist.	-4195 Sep 18 j 16:53		18.60612 AU
minimum elong	-4202 Feb 14 j 04:24			direct	-4195 Dec 02 j 07:46	22° ≈ 05'43	
max. Earth dist.	-4202 Feb 14 j 21:03		20.95353 AU				
retrograde	-4202 Jun 05 j 12:27			conjunction	-4194 Mar 20 j 03:11		0°-48'-15
opposition	-4202 Aug 21 j 19:29			minimum elong	-4194 Mar 20 j 03:11	26°≈07'58	0°48'23
min. Earth dist.	-4202 Aug 21 j 05:06		18.93581 AU	max. Earth dist.	-4194 Mar 20 j 04:06		20.57815 AU
direct	-4202 Nov 04 j 10:36	23° ♂ 31'43			-4194 Jun 13 j 10:29	0°) {	
		_		retrograde	-4194 Jul 09 j 07:23	0°) 16'48	
conjunction	-4201 Feb 18 j 14:04	27° පි 26'35			-4194 Aug 04 j 05:21	30°R ≈	
minimum elong	-4201 Feb 18 j 14:04	27° る 26'35		opposition	-4194 Sep 23 j 04:04	28° ≈ 15'57	
max. Earth dist.	-4201 Feb 19 j 05:58		20.91656 AU	min. Earth dist.	-4194 Sep 23 j 03:55		18.54961 AU
	-4201 Apr 07 j 22:33	0° ≈		direct	-4194 Dec 06 j 16:16	26° ≈ 16′25	
retrograde	-4201 Jun 09 j 22:00	1° ≈ 31'02			-4193 Mar 19 j 00:33	0° ∀	
	-4201 Aug 14 j 02:36	30°Ŗる					
opposition	-4201 Aug 26 j 01:37	29° る 30'46		conjunction	-4193 Mar 24 j 18:51	0° ∺ 20′03	
min. Earth dist.	-4201 Aug 25 j 12:43		18.89688 AU	minimum elong	-4193 Mar 24 j 18:51	0° ¥ 20′03	
direct	-4201 Nov 08 j 16:34	27° පි 33'16		max. Earth dist.	-4193 Mar 24 j 18:24		20.52028 AU
	-4200 Jan 27 j 11:18	0° ≈		retrograde	-4193 Jul 13 j 21:06	4° ∺ 29'39	
				opposition	-4193 Sep 27 j 13:03		0°-51'-42
conjunction	-4200 Feb 23 j 00:03	1° ≈ 28'54	0°-48'-51	min. Earth dist.	-4193 Sep 27 j 14:29		18.49030 AU
minimum elong	-4200 Feb 23 j 00:03	1° ≈ 28'54		direct	-4193 Dec 11 j 01:35	0° ∺ 28'54	
max. Earth dist.	-4200 Feb 23 j 13:05		20.87596 AU				
retrograde	-4200 Jun 13 j 07:50	5° ≈ 33'50		conjunction	-4192 Mar 28 j 11:02	4°) 33′55	0°-45'-59
opposition	-4200 Aug 29 j 07:55	3° ≈ 33'25	0°-54'-22	minimum elong	-4192 Mar 28 j 11:03	4°) 33′55	
min. Earth dist.	-4200 Aug 28 j 20:53		18.85470 AU	max. Earth dist.	-4192 Mar 28 j 06:50		20.45960 AU
direct	-4200 Nov 11 j 21:41	1° ≈ 35'37		retrograde	-4192 Jul 17 j 11:17	8°) 44'18	
				opposition	-4192 Sep 30 j 22:44		0°-50'-10
conjunction	-4199 Feb 26 j 10:49	5° ≈ 32'09	0°-49'-22	min. Earth dist.	-4192 Oct 01 j 02:56		18.42830 AU
minimum elong	-4199 Feb 26 j 10:49	5° ≈ 32'09	0°49'33	direct	-4192 Dec 14 j 11:53	4°) 43′05	
max. Earth dist.	-4199 Feb 26 j 23:09		20.83226 AU				
retrograde	-4199 Jun 17 j 18:25	9° ≈ 37'36		conjunction	-4191 Apr 02 j 04:21	8°) 49′33	0°-44'-28
opposition	-4199 Sep 02 j 14:22		0°-54'-49	minimum elong	-4191 Apr 02 j 04:21	8°) (49′33	0°44'33
min. Earth dist.	-4199 Sep 02 j 04:39		18.80960 AU	max. Earth dist.	-4191 Apr 01 j 22:38		20.39626 AU
direct	-4199 Nov 16 j 04:19	5° ≈ 38'59		retrograde	-4191 Jul 22 j 01:47	13°) €00'41	
				opposition	-4191 Oct 05 j 08:49	10° ¥ 59'34	
conjunction	-4198 Mar 02 j 22:02	9° ≈ 36′28	0°-49'-39	min. Earth dist.	-4191 Oct 05 j 14:29		18.36365 AU
minimum elong	-4198 Mar 02 j 22:02	9° ≈ 36′28	0°49'48	direct	-4191 Dec 18 j 23:26	8° ¥ 58'58	
max. Earth dist.	-4198 Mar 03 j 07:23		20.78598 AU				
retrograde	-4198 Jun 22 j 05:11	13° ≈ 42'32		conjunction	-4190 Apr 06 j 22:19		0°-42'-40
opposition	-4198 Sep 06 j 21:11	11°≈41'53	0°-55'00	minimum elong	-4190 Apr 06 j 22:19	13°) €06'53	0°42'46
min. Earth dist.	-4198 Sep 06 j 13:28		18.76210 AU	max. Earth dist.	-4190 Apr 06 j 12:53		20.33053 AU
direct	-4198 Nov 20 j 09:54	9° ≈ 43'29		retrograde	-4190 Jul 26 j 16:14		
_				opposition	-4190 Oct 09 j 19:38		
conjunction	-4197 Mar 07 j 10:16		0°-49'-41	min. Earth dist.	-4190 Oct 10 j 04:12		18.29694 AU
minimum elong	-4197 Mar 07 j 10:16	13°≈42'03	0°49'51	direct	-4190 Dec 23 j 11:17	13° ∺ 16′29	
max. Earth dist.	-4197 Mar 07 j 18:46		20.73728 AU			. = 0 \	
	-4197 Mar 30 j 09:55			conjunction	-4189 Apr 11 j 17:15		0°-40'-38
retrograde	-4197 Jun 26 j 16:57	17°≈48'44		minimum elong	-4189 Apr 11 j 17:15		0°40'42
opposition	-4197 Sep 11 j 04:09	15° ≈ 48'01	0°-54'-55	max. Earth dist.	-4189 Apr 11 j 06:22	17° ∺ 24'17	20.26300 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4189 in astronomical counting style is the year 4190 BCE in historical counting style. retrograde -4189 Jul 31 j 07:52 21° ¥ 38'30 retrograde -4181 Sep 05 i 09:16 27° Υ 18'14 -4189 Oct 14 j 06:51 19°¥37'07 0°-43'-51 -4181 Nov 18 j 02:40 25°**Υ**16'11 0°-16'-16 opposition opposition min. Earth dist. -4189 Oct 14 j 16:38 19° \(\) 36'04 18.22872 AU min. Earth dist. -4181 Nov 19 j 00:23 25°Υ 13'50 17.71477 AU -4189 Dec 28 j 01:01 17° ¥ 35'39 -4180 Feb 01 j 13:05 23°**Y**11'42 direct direct -4180 May 22 j 00:02 27° **Y** 30'41 19.68706 AU max. Earth dist. -4188 Apr 15 j 12:44 21° **)** 46'32 0°-38'-21 conjunction -4180 May 23 j 03:11 27°**Υ**'34'49 0°-12'-43 minimum elong conjunction -4180 May 23 j 03:11 27°**Υ**34'49 max. Earth dist. minimum elong 0°12'40 -4188 Aug 03 j 22:51 25°**米** 59'54 -4180 May 22 j 23:00 27°**Υ**34'12 retrograde behind sun begin 27°**Ƴ**35′26 opposition -4188 Oct 17 j 18:52 23° ¥ 58'21 0°-41'-11 behind sun end -4180 May 23 j 07:21 min. Earth dist. -4188 Oct 18 j 07:22 23° ¥ 57'01 18.15997 AU -4180 Jul 04 j 00:08 0° 8 -4188 Dec 31 j 14:01 21° **€** 56'25 -4180 Sep 09 j 05:50 1°**8**54'03 direct retrograde -4180 Nov 18 j 19:37 30°₹Υ conjunction -4187 Apr 20 j 08:58 26° **★** 08'49 0°-35'-50 opposition -4180 Nov 21 j 20:54 29°Y52'02 0°-11'-59 minimum elong -4187 Apr 20 j 08:58 26° ¥ 08'49 0°35'52 min. Earth dist. -4180 Nov 22 j 20:45 29°**Y**49'26 17.66037 AU max. Earth dist. -4187 Apr 19 j 17:37 26°**₭**06'33 20.12561 AU direct -4179 Feb 05 j 07:58 27°**Y**47'17 -4187 Jul 10 j 01:30 $0^{\circ}\Upsilon$ -4179 Apr 20 j 17:07 0°8 retrograde -4187 Aug 08 j 16:03 0°**Y**22'57 max. Earth dist. -4179 May 26 j 23:54 2°807'22 19.63384 AU -4187 Sep 07 j 11:28 30°R € opposition -4187 Oct 22 j 07:24 28° ★21'15 0°-38'-17 conjunction -4179 May 28 j 04:59 2°**8**11'49 0°-8'-50 min. Earth dist. -4187 Oct 22 j 20:46 28° H 19'48 18.09128 AU minimum elong -4179 May 28 j 04:59 2°811'49 0°08'45 direct -4186 Jan 05 i 05:42 26° H 18'52 behind sun begin -4179 May 27 j 23:09 2°810'56 -4186 Apr 16 j 01:08 $0^{\circ}\Upsilon$ behind sun end -4179 May 28 j 10:48 2°812'41 max. Earth dist. -4186 Apr 24 j 11:50 0°**Υ**'30'06 20.05720 AU retrograde -4179 Sep 14 i 04:31 6°831'41 opposition -4179 Nov 26 i 15:52 4°**8**29'40 0°-7'-36 -4186 Apr 25 j 06:00 0°**Υ**'32'47 0°-33'-5 min. Earth dist. -4179 Nov 27 i 16:02 4°**8**27'02 17.60832 AU conjunction -4186 Apr 25 j 06:00 0°**Y**32'47 direct -4178 Feb 10 j 06:23 2°824'38 minimum elong 0°33'06 -4186 Aug 13 j 07:59 4°**Y**47'39 max. Earth dist. -4178 Jun 01 j 01:51 6°**႘**45'57 19.58286 AU retrograde -4186 Oct 26 j 20:39 2°Y45'49 0°-35'-8 opposition -4186 Oct 27 j 12:37 2°**Υ**'44'06 18.02346 AU -4178 Jun 02 j 07:32 min. Earth dist. 6°850'31 0°-4'-52 conjunction -4185 Jan 09 j 19:52 0°Y43'00 -4178 Jun 02 j 07:31 6°**8**50'31 0°04'47 direct minimum elong -4185 Apr 29 j 08:26 4°**Υ**55'35 19.99004 AU -4178 Jun 02 j 00:54 6°**8**49'31 max. Earth dist. behind sun begin -4178 Jun 02 j 14:08 behind sun end 6°**8**51'30 -4185 Apr 30 j 03:50 4°Υ58'28 0°-30'-8 -4178 Sep 19 j 02:02 11°810'56 conjunction retrograde 4°**Υ**58'28 -4185 Apr 30 j 03:50 -4178 Dec 01 j 11:46 9°**8**08'56 0°-3'-8 minimum elong 0°30'09 opposition -4185 Aug 18 j 02:52 9°**Y**14′05 -4178 Dec 02 j 13:46 9°**8**06'06 17.55865 AU retrograde min. Earth dist. 7°**Υ**12'08 0°-31'-46 -4185 Oct 31 j 10:40 -4177 Feb 15 j 03:19 opposition direct 7°**8**03'39 min. Earth dist. -4185 Nov 01 j 03:07 7°**Υ**10'22 17.95710 AU max. Earth dist. -4177 Jun 06 j 02:41 11°**8**25'52 19.53460 AU direct -4184 Jan 14 j 13:08 5°Y08'55 -4177 Jun 07 j 10:17 11°\(\arrow\) 30'45 0°00'-48 max. Earth dist. -4184 May 03 j 04:34 9°**Y**22'42 19.92457 AU conjunction minimum elong -4177 Jun 07 j 10:17 11°**8**30'45 -4184 May 04 j 02:06 9°Υ25'55 0°-26'-59 behind sun begin -4177 Jun 07 j 03:32 11°**8**29'44 conjunction -4184 May 04 j 02:06 9°**Y**25'55 behind sun end -4177 Jun 07 j 17:03 11°**8**31'46 minimum elong 0°26'59 -4184 Aug 21 j 20:17 13°**Y**42'17 -4177 Aug 11 j 07:26 15°**8** retrograde -4184 Nov 04 j 01:33 11°**Υ**40'16 0°-28'-10 -4177 Aug 18 j 18:16 15°**8**15'40 opposition asc. node -4184 Nov 04 j 20:18 11°**Υ**'38'14 17.89281 AU -4177 Sep 24 i 00:53 15° \$\frac{8}{51}'41 min. Earth dist. retrograde 9°**Ƴ**36'40 -4177 Nov 07 i 16:25 15°R& direct -4183 Jan 18 i 04:43 -4183 May 08 j 02:27 13°**Υ**'51'48 19.86150 AU -4177 Dec 06 j 08:23 13°\(\delta 49'38 \) 0°01'21 max. Earth dist. opposition min. Earth dist. -4177 Dec 07 i 10:31 13°846'47 17.51192 AU $-4183 \text{ May } 09 \text{ i } 01:17 \quad 13^{\circ} \Upsilon 55'14 \quad 0^{\circ} -23' -39$ direct -4176 Feb 20 i 03:35 11°844'05 conjunction -4183 May 09 i 01:17 13°**Υ**55'14 0°23'39 -4176 May 22 j 20:49 15°8 minimum elong retrograde -4183 Aug 26 j 16:30 18°Υ 12'20 max. Earth dist. -4176 Jun 10 j 06:01 16°807'27 19.48937 AU -4183 Nov 08 j 16:58 16°**Υ**10'17 0°-24'-22 opposition -4183 Nov 09 j 12:03 16°**Υ**08'13 17.83094 AU min. Earth dist. conjunction -4176 Jun 11 j 13:20 16°**8**12'18 0°03'20 -4182 Jan 22 j 23:20 14°**Υ**′06'21 direct minimum elong -4176 Jun 11 j 13:20 16°**8**12'18 0°03'28 max. Earth dist. -4182 May 13 j 00:47 18°**Υ**22'46 19.80083 AU behind sun begin -4176 Jun 11 j 06:37 16°**8**11'18 -4176 Jun 11 j 20:03 16°**8**13'19 behind sun end -4182 May 14 j 01:17 18° **Y** 26'28 0° -20'-9 retrograde -4176 Sep 27 j 22:54 20°833'41 conjunction -4182 May 14 j 01:17 18°**Υ**26'28 0°20'08 opposition -4176 Dec 10 j 05:48 18°\(\mathbf{3}31'36 \) 0°05'52 minimum elong -4182 Aug 31 j 11:42 22°**Υ**44'18 -4176 Dec 11 j 09:08 18°**8**28'37 17.46844 AU retrograde min. Earth dist. -4182 Nov 13 j 09:29 20°**Y**42'15 0°-20'-24 -4175 Feb 24 j 02:42 16°**8**25'48 opposition direct -4175 Jun 15 j 07:38 20°**8**49'54 19.44783 AU min. Earth dist. $-4182 \text{ Nov } 14 \text{ j } 06:52 \quad 20^{\circ} \Upsilon 39'56 \quad 17.77160 \text{ AU}$ max. Earth dist. direct -4181 Jan 27 j 16:38 18°**Υ**38'02 max. Earth dist. -4181 May 17 j 23:47 22°**γ**55'43 19.74277 AU conjunction -4175 Jun 16 j 16:35 20°**8**55'01 0°07'22 minimum elong -4175 Jun 16 j 16:35 20°**8**55'01 0°07'30 -4181 May 19 j 01:51 22°**Υ**59'40 0°-16'-30 behind sun begin -4175 Jun 16 j 10:27 20°854'06 conjunction -4181 May 19 j 01:51 22°**Υ**59'40 0°16'27 behind sun end -4175 Jun 16 j 22:43 20°**8**55'57 minimum elong

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4175 in astronomical counting style is the year 4176 BCE in historical counting style. retrograde -4175 Oct 02 j 21:40 25° \$\frac{8}{16}\$'46 conjunction -4167 Jul 25 і 16:34 28°Д59'23 0°35'55 -4175 Dec 15 j 03:38 23°8 14'38 0°10'22 minimum elong -4167 Jul 25 j 16:34 28°**Д**59'23 0°36'06 opposition min. Earth dist. -4175 Dec 16 j 07:03 23°811'38 17.42900 AU max. Earth dist. -4167 Jul 24 j 14:18 28°**Д**55'14 19.31129 AU -4174 Mar 01 j 05:01 21°808'35 -4167 Aug 10 j 18:34 direct 0.00 -4167 Nov 09 j 19:02 retrograde 3°921'43 -4174 Jun 21 j 20:08 25°**8**38'42 0°11'21 -4166 Jan 22 j 07:48 1°**©**19'57 conjunction opposition 0°41'35 -4174 Jun 21 j 20:08 25°**8**38'42 -4166 Jan 23 j 07:03 minimum elong 0°11'31 min. Earth dist. 1°9517'27 17.31605 AU -4174 Jun 21 j 15:20 25°**8**37'58 -4166 Feb 24 j 18:02 behind sun begin 30°R∏ -4174 Jun 22 j 00:56 25°**8**39'26 behind sun end direct -4166 Apr 09 j 03:36 29°**Ⅲ**13'34 max. Earth dist. -4174 Jun 20 j 12:09 25°833'43 19.41050 AU -4166 May 21 j 15:10 0ಂಣ -4174 Oct 02 j 19:44 $0^{\circ}\Pi$ -4174 Oct 07 j 20:03 -4166 Jul 30 j 18:27 retrograde 0°**Ⅱ**00'43 conjunction 3°**5**45'59 0°38'38 -4166 Jul 30 j 18:27 -4174 Oct 12 j 21:01 30°R8 minimum elong 3°9545'59 0°38'50 opposition -4174 Dec 20 j 02:21 27°**8**58'34 0°14'48 max. Earth dist. -4166 Jul 29 j 17:30 3°542'02 19.32127 AU min. Earth dist. -4174 Dec 21 j 06:11 27°**8**55'32 17.39401 AU retrograde -4166 Nov 14 j 20:41 8°908'06 direct -4173 Mar 06 j 06:25 25°**8**52'18 opposition -4165 Jan 27 j 10:16 6°906'27 0°44'28 -4173 Jun 20 j 19:10 $\Pi^{\circ}0$ min. Earth dist. -4165 Jan 28 j 07:20 6°504'11 17.32849 AU direct -4165 Apr 14 j 09:29 4°9500'14 conjunction -4173 Jun 26 j 23:21 0°**Д**23'09 0°15'17 minimum elong -4173 Jun 26 j 23:21 0°**Ⅱ**23'09 0°15'27 conjunction -4165 Aug 04 j 19:49 8°932'17 0°41'05 8°932'17 behind sun begin -4173 Jun 26 j 21:45 0°**Ⅲ**22'55 minimum elong -4165 Aug 04 j 19:49 0°41'15 behind sun end -4173 Jun 27 i 00:57 0°**Ⅱ**23'24 max. Earth dist. -4165 Aug 03 i 20:47 8°528'39 19.33612 AU max. Earth dist. -4173 Jun 25 j 14:26 0°**Ⅱ**18'01 19.37806 AU retrograde -4165 Nov 19 j 19:04 12°954'07 retrograde -4173 Oct 12 i 18:59 4°**Ⅱ**45'25 opposition -4164 Feb 01 i 13:03 10°\$52'36 0°47'02 opposition -4173 Dec 25 j 01:37 2°**II**43'13 0°19'08 min. Earth dist. -4164 Feb 02 i 09:50 10°\$50'22 17.34576 AU min. Earth dist. -4173 Dec 26 j 05:15 2°**Ⅱ**40'12 17.36436 AU direct -4164 Apr 18 j 12:27 8°946'33 -4172 Mar 10 j 09:31 0°**I**I36'46 direct max. Earth dist. -4172 Jun 29 j 19:24 5°**Д**03'20 19.35119 AU -4164 Aug 08 j 20:40 13°518'05 0°43'14 conjunction -4164 Aug 08 j 20:40 13°518'05 0°43'25 minimum elong -4164 Aug 07 j 22:39 13°514'36 19.35570 AU -4172 Jul 01 j 02:44 5°**I**08'15 0°19'07 conjunction max. Earth dist. minimum elong -4172 Jul 01 j 02:44 5°**I**08'14 0°19'16 -4164 Nov 23 j 19:57 17°539'33 retrograde -4172 Oct 16 j 18:30 9°**Ⅲ**30′39 -4163 Feb 05 j 15:36 15°\$38'08 0°49'16 retrograde opposition 7°**II**28'27 0°23'21 -4163 Feb 06 j 10:00 15°536'09 17.36745 AU opposition -4172 Dec 29 j 01:21 min. Earth dist. 7°**Д**25'30 17.34044 AU min. Earth dist. -4172 Dec 30 j 04:29 -4163 Apr 23 j 18:38 13°532'16 direct 5°**Ⅲ**21'52 -4171 Mar 15 j 12:21 direct 9°**耳**48′52 19.33036 AU 0°45'05 -4171 Jul 04 j 22:18 -4163 Aug 13 j 21:05 18°903'09 max. Earth dist. conjunction -4163 Aug 13 j 21:05 18°503'09 minimum elong 0°45'16 conjunction -4171 Jul 06 j 05:54 9°**I**53'50 0°22'49 max. Earth dist. -4163 Aug 13 j 01:29 18°500'03 19.37949 AU minimum elong -4171 Jul 06 j 05:54 9°**Ⅱ**53'50 0°23'00 retrograde -4163 Nov 28 j 17:41 22°524'12 retrograde -4171 Oct 21 j 17:49 14°**Ц**16'21 opposition -4162 Feb 10 j 18:31 20°522'51 0°51'10 opposition -4170 Jan 03 j 01:45 12°**Ц**14'10 0°27'25 min. Earth dist. -4162 Feb 11 j 12:24 20°520'57 17.39333 AU min. Earth dist. -4170 Jan 04 j 04:32 12°**Ⅱ**11'15 17.32289 AU direct -4162 Apr 28 j 21:56 18°517'11 -4170 Mar 20 j 14:47 10°**Д**07'29 direct max. Earth dist. -4170 Jul 10 j 03:12 14°**Д**35'08 19.31603 AU -4162 Aug 18 j 20:31 22°547'17 0°46'37 conjunction -4162 Aug 18 j 20:31 22°547'17 0°46'48 minimum elong -4170 Jul 11 j 08:59 14°**Д**39'50 0°26'23 -4162 Aug 18 j 01:55 22°544'20 19.40753 AU conjunction max. Earth dist. -4170 Jul 11 j 08:59 14°**Д**39'50 minimum elong 0°26'33 retrograde -4162 Dec 03 j 17:36 27°507'51 -4170 Oct 26 j 18:55 19°**Д**02'22 -4161 Feb 15 j 21:12 25°\$06'34 0°52'41 retrograde opposition -4169 Jan 08 j 02:37 17°**Д**00'16 0°31'18 opposition min. Earth dist. -4161 Feb 16 i 12:24 25°504'57 17.42340 AU min. Earth dist. -4169 Jan 09 i 04:05 16° **1**57'30 17.31173 AU direct -4161 May 04 j 03:29 23°501'06 direct -4169 Mar 25 i 18:38 14°**I**I53'36 max. Earth dist. -4169 Jul 15 j 06:36 19°**Д**21'33 19.30819 AU -4161 Aug 23 j 19:23 27°530'16 0°47'50 conjunction -4161 Aug 23 j 19:23 27°530'16 0°48'01 minimum elong conjunction -4169 Jul 16 j 11:48 19°**Ⅲ**26'09 0°29'46 max. Earth dist. -4161 Aug 23 j 03:51 27°\$27'49 19.43971 AU -4169 Jul 16 j 11:48 19°**Д**26'09 minimum elong 0°29'57 -4161 Oct 04 j 17:13 0 $^{\circ}\Omega$ retrograde -4169 Oct 31 j 18:15 23°**II**48'42 retrograde -4161 Dec 08 j 14:43 1°**Ω**50′17 -4160 Feb 16 j 16:35 30°Rှေ opposition -4168 Jan 13 j 03:59 21°**Ц**46'41 0°34'58 min. Earth dist. -4168 Jan 14 j 05:08 21°**Ц**43'58 17.30723 AU -4160 Feb 20 j 23:44 29°549'03 0°53'51 opposition -4168 Mar 29 j 20:20 19°**Д**40'03 min. Earth dist. -4160 Feb 21 j 13:55 29°547'33 17.45767 AU direct -4168 Jul 19 j 10:48 24°**Д**08'23 19.30686 AU direct -4160 May 08 j 06:31 27°543'49 max. Earth dist. -4160 Jul 22 j 07:01 0 $^{\circ}$ Ω conjunction -4168 Jul 20 j 14:16 24°**Ⅲ**12'43 0°32'57 minimum elong -4168 Jul 20 j 14:16 24°**I**I12'43 0°33'09 conjunction -4160 Aug 27 j 17:11 2°**Ω**11'55 0°48'43 retrograde -4168 Nov 04 j 20:15 28°**Ⅲ**35'11 minimum elong -4160 Aug 27 j 17:11 2°**Ω**11'55 0°48'53 opposition -4167 Jan 17 j 05:42 26° **Ⅲ**33'18 0°38'25 max. Earth dist. -4160 Aug 27 j 02:46 2°**Ω**09'39 19.47622 AU min. Earth dist. -4167 Jan 18 j 05:04 26°**II**30'46 17.30877 AU -4160 Dec 12 j 13:17 6°**Q**31'21 retrograde -4167 Apr 04 j 01:14 24°**Д**26'47 -4159 Feb 25 j 01:54 4°Ω30'09 0°54'39 direct opposition

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4159 in astronomical counting style is the year 4160 BCE in historical counting style. -4159 Feb 25 i 13:18 $4^{\circ}\Omega$ 28'57 17.49632 AU min. Earth dist. opposition -4151 Apr 04 i 04:41 11° m 02'21 0°48'28 direct -4159 May 13 j 10:05 2°Ω25'08 min. Earth dist. -4151 Apr 03 j 21:58 11° Mp 03'03 17.95169 AU direct -4151 Jun 20 j 08:50 9° m 00'31 -4159 Sep 01 j 14:16 6°Ω52'06 0°49'17 conjunction -4159 Sep 01 j 14:16 6°\$\O2'06\0°49'26 conjunction -4151 Oct 07 j 07:57 13° mp 16'04 0°42'40 minimum elong -4159 Sep 01 j 03:22 6°**Ω**50'23 19.51708 AU -4151 Oct 07 j 07:57 13° mp 16'04 0°42'44 max. Earth dist. minimum elong -4151 Oct 07 j 16:13 13° Mp 17'20 19.98518 AU -4159 Dec 17 j 09:53 retrograde 11°**Ω**10′53 max. Earth dist. -4158 Mar 02 j 03:52 -4150 Jan 22 j 22:09 17° M 29'04 opposition 9°**Ω**09'44 0°55'05 retrograde -4150 Apr 09 j 02:37 15° Mp 28'56 0°46'17 min. Earth dist. -4158 Mar 02 j 13:33 9°**Ω**08'43 17.53940 AU opposition direct -4158 May 18 j 12:12 7°Ω05'00 min. Earth dist. -4150 Apr 08 j 17:08 15° m 29'54 18.01866 AU -4150 Jun 25 j 06:50 13° M 27'32 direct -4158 Sep 06 j 10:20 11° **Ω**30'43 0°49'31 conjunction -4158 Sep 06 j 10:20 11° **Q**30'43 0°49'39 -4150 Oct 11 j 21:38 17° m 41'29 minimum elong conjunction 0°40'36 -4158 Sep $06 \text{ j } 00:54 \ 11^{\circ}\Omega 29'14 \ 19.56259 \text{ AU}$ -4150 Oct 11 j 21:39 17° m 41'29 max. Earth dist. minimum elong 0°40'38 -4158 Nov 09 j 19:27 15°**Ω** max. Earth dist. -4150 Oct 12 j 07:31 17° m/42'59 20.05217 AU retrograde -4158 Dec 22 j 07:44 15° **Ω**48'50 retrograde -4149 Jan 27 j 14:08 21° M 53'43 -4157 Feb 04 j 14:19 15°R**Ω** opposition -4149 Apr 13 j 23:58 19° **m** 53'39 0°43'50 opposition -4157 Mar 07 j 05:27 13° Ω 47'45 0° 55'09 min. Earth dist. -4149 Apr 13 j 13:26 19° M 54'44 18.08565 AU min. Earth dist. -4157 Mar 07 j 12:15 $13^{\circ}\Omega$ 47'02 17.58731 AU direct -4149 Jun 30 j 01:49 17° m 52'39 direct -4157 May 23 j 13:25 $11^{\circ}\Omega$ 43'20 -4157 Aug 24 j 01:01 15°**Ω** conjunction -4149 Oct 16 j 10:34 22° m 05'01 0°38'18 minimum elong -4149 Oct 16 j 10:34 22° m 05'01 0°38'20 conjunction -4157 Sep 11 j 05:35 $16^{\circ}\Omega$ 07'43 $0^{\circ}49'26$ max. Earth dist. -4149 Oct 16 j 22:33 22° m 06'51 20.11892 AU minimum elong -4157 Sep 11 j 05:36 $16^{\circ}\Omega$ 07'43 $0^{\circ}49'33$ retrograde -4148 Feb 01 i 06:32 26° m 16'28 -4148 Apr 17 j 20:23 24° **m** 16'28 max. Earth dist. -4157 Sep 10 j 23:52 16° Ω 06'50 19.61282 AU opposition 0°41'09 retrograde -4157 Dec 27 i 04:00 $20^{\circ}\Omega$ 25'09 min. Earth dist. -4148 Apr 17 j 07:09 24° Mp 17'49 18.15193 AU opposition -4156 Mar 11 j 06:35 $18^{\circ}\Omega$ 24'11 $0^{\circ}54'52$ direct -4148 Jul 03 j 22:08 22° m 15'51 min. Earth dist. -4156 Mar 11 j 11:06 18° **Ω**23'42 17.63970 AU -4156 May 27 j 14:19 16° **Ω**20'08 -4148 Oct 19 j 22:43 26° m 26'37 direct conjunction 0°35'48 minimum elong -4148 Oct 19 j 22:43 26° m 26'37 0°35'48 -4156 Sep 14 j 23:58 $20^{\circ}\Omega 43'09$ $0^{\circ}49'02$ max. Earth dist. -4148 Oct 20 j 12:20 26° m 28'41 20.18473 AU conjunction -4156 Sep 14 j 23:58 20° **Ω** 43'09 0°49'10 -4148 Dec 28 j 18:23 0∘**⊽** minimum elong -4156 Sep 14 j 19:48 20° **Ω**42'30 19.66746 AU -4147 Feb 04 j 20:39 0° 237'16 max. Earth dist. retrograde -4156 Dec 31 j 01:00 24° Ω59'52 -4147 Mar 16 j 08:40 30°R M retrograde -4155 Mar 16 j 07:06 22° **Ω**59'01 0°54'14 -4147 Apr 22 j 16:06 28° m 37'19 0°38'14 opposition opposition -4155 Mar 16 j 09:07 22° **Ω**58'49 17.69643 AU min. Earth dist. min. Earth dist. -4147 Apr 22 j 02:07 28° M 38'44 18.21737 AU -4155 Jun 01 j 14:00 20° Ω55'22 -4147 Jul 08 j 15:02 26° m 37'02 direct direct -4147 Oct 11 j 15:40 0∘<u>ଫ</u> conjunction -4155 Sep 19 j 17:40 25° Ω 16'59 0°48'20 -4147 Oct 24 j 10:05 minimum elong -4155 Sep 19 j 17:40 25° Ω 16'59 0°48'26 conjunction 0°**2**46'13 0°33'06 max. Earth dist. -4155 Sep 19 j 16:59 25° Ω16'53 19.72612 AU minimum elong -4147 Oct 24 j 10:05 0°**2**46'13 0°33'07 retrograde -4154 Jan 04 j 20:39 29°**\Omega**32'59 max. Earth dist. -4147 Oct 25 j 01:35 0°**2**48'34 20.24980 AU -4154 Mar 21 j 07:19 27° **Ω**32'18 0°53'16 retrograde -4146 Feb 09 j 12:05 4°**£**56'04 opposition min. Earth dist. -4154 Mar 21 j 06:46 27° **Ω**32'21 17.75666 AU -4146 Apr 27 j 10:59 2°**£**56'08 0°35'09 opposition direct -4154 Jun 06 j 14:07 25°**Ω**29'06 min. Earth dist. -4146 Apr 26 j 18:10 2°**≏**57'51 18.28197 AU -4146 Jul 13 i 09:28 direct 0°**£**56'11 $-4154 \text{ Sep } 24 \text{ i } 10:16 \quad 29^{\circ} \Omega 49'15 \quad 0^{\circ} 47'20$ conjunction $-4154 \text{ Sep } 24 \text{ i } 10:16 \quad 29^{\circ} \Omega 49'15 \quad 0^{\circ} 47'27$ -4146 Oct 28 i 20:33 5°**2**03'48 0°30'15 minimum elong conjunction -4154 Sep 24 j 11:18 29° Ω 49'24 19.78795 AU -4146 Oct 28 i 20:33 max. Earth dist. minimum elong 5°**£**03'49 0°30'14 -4154 Sep 27 j 07:25 0°m max. Earth dist. -4146 Oct 29 i 14:02 5°**2**06'27 20.31399 AU retrograde -4153 Jan 09 i 16:34 4° m 04'32 retrograde -4145 Feb 14 i 00:44 9°**£**12'54 opposition -4153 Mar 26 j 07:06 2°m03'59 0°51'59 min. Earth dist. -4145 May 01 j 11:38 7°**2**14'45 18.34593 AU min. Earth dist. -4153 Mar 26 j 04:29 2° Mp 04'15 17.81991 AU opposition -4145 May 02 j 05:10 7°**£**12'58 0°31'53 -4145 Jul 18 j 00:35 direct -4153 Jun 11 j 12:34 0°Mp01'14 direct 5°**£**13'21 conjunction -4153 Sep 29 j 02:21 4° m 19'53 0°46'03 conjunction -4145 Nov 02 j 06:25 9°**£**19'27 0°27'15 minimum elong -4153 Sep 29 j 02:21 4° To 19'53 $0^{\circ}46'08$ minimum elong -4145 Nov 02 j 06:25 9°**₽**19'27 0°27'13 -4153 Sep 29 j 06:27 4° ከ 20'31 19.85235 AU max. Earth dist. -4145 Nov 03 j 01:37 9°**£**22'20 20.37767 AU max. Earth dist. retrograde -4152 Jan 14 j 10:53 8° m/34'24 retrograde -4144 Feb 18 j 15:01 13°**£**27'47 -4152 Mar 30 j 06:04 6° Tp 34'01 0° 50'22 -4144 May 05 j 22:08 11°**£**27'53 0°28'28 opposition opposition min. Earth dist. -4152 Mar 30 j 00:50 6° Mg 34'33 17.88513 AU min. Earth dist. -4144 May 05 j 01:48 11°**2**29'57 18.40934 AU direct -4152 Jun 15 j 11:54 4° Mp 31'44 direct -4144 Jul 21 j 16:37 9°**£**28'35 conjunction -4152 Oct 02 j 17:31 8° m 48'50 0°44'29 conjunction -4144 Nov 05 j 15:36 13°**2**33'15 0°24'08 minimum elong -4152 Oct 02 j 17:31 8° m 48'50 0°44'34 minimum elong -4144 Nov 05 j 15:37 13°**△**33'15 0°24'06 max. Earth dist. -4152 Oct 02 j 23:12 8° Mp 49'43 19.91829 AU max. Earth dist. -4144 Nov 06 j 12:49 13°**೨**36'25 20.44073 AU

retrograde

-4143 Feb 22 j 02:34 17°**2**40'53

retrograde

-4151 Jan 18 j 04:51 13° M 02'37

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		-			4144 BCE in historical c		
opposition	-4143 May 10 j 14:38			max. Earth dist.	-4137 Dec 05 j 23:18		20.83819 AU
min. Earth dist.	-4143 May 09 j 17:39		18.47220 AU	desc. node	-4137 Dec 18 j 11:38		
direct	-4143 Jul 26 j 05:55	13° <u>42</u> ′05			-4136 Jan 19 j 18:57		
				retrograde	5	16°M34'10	
conjunction	-4143 Nov 10 j 00:04				-4136 May 30 j 00:32	•	
minimum elong	-4143 Nov 10 j 00:04		0°20'50	min. Earth dist.	-4136 Jun 08 j 08:47		
max. Earth dist.	-4143 Nov 10 j 22:45		20.50329 AU	opposition	-4136 Jun 09 j 13:20		0°-1'-50
retrograde	-4142 Feb 26 j 16:03			direct	-4136 Aug 24 j 11:36		
min. Earth dist.	-4142 May 14 j 06:34				-4136 Nov 10 j 10:30	15°11L	
opposition	-4142 May 15 j 06:16		0°21'17				
direct	-4142 Jul 30 j 19:40	17° £ 53′58		conjunction	-4136 Dec 08 j 00:47	16°M33'53	
		_		minimum elong	,	16° ™ 33'53	0°03'36
conjunction	-4142 Nov 14 j 08:08		0°17'35	behind sun begin	-4136 Dec 07 j 18:16	16°M32'58	
minimum elong	-4142 Nov 14 j 08:08		0°17'32	behind sun end	5	16° ™ 34'48	
max. Earth dist.	-4142 Nov 15 j 08:45		20.56483 AU	max. Earth dist.	-4136 Dec 09 j 06:21		20.88135 AU
retrograde	-4141 Mar 03 j 02:57			retrograde	-4135 Mar 27 j 20:18	20° ™ 37′26	
opposition	-4141 May 19 j 21:10	24° ≏ 02'38	0°17'32	min. Earth dist.	-4135 Jun 12 j 20:32	18° ™ 40′59	18.90147 AU
min. Earth dist.	-4141 May 18 j 21:07		18.59531 AU	opposition	-4135 Jun 14 j 00:26	18° ™ 38'12	0°-5'-43
direct	-4141 Aug 04 j 07:24	22° ≏ 04'25		direct	-4135 Aug 28 j 19:46	16°M41'43	
		_					
conjunction	-4141 Nov 18 j 15:41		0°14'11	conjunction	-4135 Dec 12 j 06:34	20°M36'31	
minimum elong	-4141 Nov 18 j 15:41		0°14'06	minimum elong	-4135 Dec 12 j 06:33	20°M36'31	0°07'04
behind sun begin	-4141 Nov 18 j 12:19	26° ≏ 04'39		behind sun begin	-4135 Dec 12 j 00:29	20°M35'40	
behind sun end	-4141 Nov 18 j 19:03	26° ≏ 05'38		behind sun end	-4135 Dec 12 j 12:38	20°M37'23	
max. Earth dist.	-4141 Nov 19 j 17:15	26° ≏ 08'55	20.62504 AU	max. Earth dist.	-4135 Dec 13 j 11:42	20° ™ 40'45	20.91968 AU
	-4140 Feb 14 j 16:29	0°M		retrograde	-4134 Apr 01 j 07:07	24°M39'43	
retrograde	-4140 Mar 06 j 15:58	0° ™ 10′57		min. Earth dist.	-4134 Jun 17 j 06:14	22°M43'18	18.93732 AU
	-4140 Mar 27 j 22:45	30° ₹ Ω		opposition	-4134 Jun 18 j 10:51	22°M40'27	0°-9'-33
min. Earth dist.	-4140 May 22 j 09:01	28° ≏ 14'01	18.65453 AU	direct	-4134 Sep 02 j 05:07	20°M44'05	
opposition	-4140 May 23 j 11:16	28° ₽ 11'23	0°13'44				
direct	-4140 Aug 07 j 19:04	26° ₽ 13'30		conjunction	-4134 Dec 16 j 12:20	24° M $_38'10$	0°-10'-20
	-4140 Nov 18 j 06:06	0° M		minimum elong	-4134 Dec 16 j 12:20	24° MJ $38'10$	0°10'30
				behind sun begin	-4134 Dec 16 j 07:10	$24^{\circ}\mathrm{ML}37^{\prime}26$	
conjunction	-4140 Nov 21 j 22:48	0°M13'05	0°10'44	behind sun end	-4134 Dec 16 j 17:29	24°M38'53	
minimum elong	-4140 Nov 21 j 22:48	0°M13'05	0°10'39	max. Earth dist.	-4134 Dec 17 j 18:13	24°M42'29	20.95298 AU
behind sun begin	-4140 Nov 21 j 17:42	0° ™ 12'21		retrograde	-4133 Apr 05 j 14:39	28°M41'00	
behind sun end	-4140 Nov 22 j 03:55	0° ™ 13'49		opposition	-4133 Jun 22 j 20:33	26°M41'41	0°-13'-19
max. Earth dist.	-4140 Nov 23 j 02:01	0° M 17′05	20.68301 AU	min. Earth dist.	-4133 Jun 21 j 16:45	26°M44'28	18.96827 AU
retrograde	-4139 Mar 11 j 01:56	4°M18′22		direct	-4133 Sep 06 j 12:14	24°M45'25	
min. Earth dist.	-4139 May 26 j 22:33	2°M21'32	18.71128 AU				
opposition	-4139 May 28 j 00:49	2°M18'54	0°09'52	conjunction	-4133 Dec 20 j 17:49	28°M38'49	0°-13'-42
direct	-4139 Aug 12 j 05:51	0°M21'24		minimum elong	-4133 Dec 20 j 17:49	28°M38'49	0°13'52
	C 3			behind sun begin	-4133 Dec 20 j 14:19	28°M38'20	
conjunction	-4139 Nov 26 j 05:38	4° ™ 19'52	0°07'15	behind sun end	-4133 Dec 20 j 21:19	28°M39'19	
minimum elong	-4139 Nov 26 j 05:38	4° ™ 19'52	0°07'09	max. Earth dist.	-4133 Dec 21 j 23:05	28°M43'03	20.98174 AU
behind sun begin	-4139 Nov 25 j 23:35	4° ™ 19'00			-4132 Jan 13 j 15:13	0° ∡ ¹	
behind sun end	-4139 Nov 26 j 11:40	4°M20'44		retrograde	-4132 Apr 09 j 00:08	2° ∡ ¹41'22	
max. Earth dist.	-4139 Nov 27 j 09:17		20.73840 AU	min. Earth dist.	-4132 Jun 25 j 01:21		18.99488 AU
retrograde	-4138 Mar 15 j 14:49	8°M24'41		opposition	-4132 Jun 26 j 05:40	0° ∡ ¹41'59	0°-16'-59
min. Earth dist.	-4138 May 31 j 09:43		18.76509 AU	11	-4132 Jul 14 j 02:43	30°RM₊	
opposition	-4138 Jun 01 j 13:39	6° ™ 25'18	0°05'58	direct	-4132 Sep 09 j 20:16	28°M45'46	
direct	-4138 Aug 16 j 16:13	4°M28'06			-4132 Nov 03 j 16:02	0° ∡ ¹	
conjunction	-4138 Nov 30 j 12:12	8°M25'34	0°03'44	conjunction	-4132 Dec 23 j 23:05	2° ∡ ³38'35	0°-16'-59
minimum elong	-4138 Nov 30 j 12:12	8°M25'34	0°03'37	minimum elong	-4132 Dec 23 j 23:05	2° ∡ ³38'35	0°17'10
behind sun begin	-4138 Nov 30 j 05:42	8°M24'38		max. Earth dist.	-4132 Dec 25 j 05:10	2° ∡ ¹42'55	21.00616 AU
behind sun end	-4138 Nov 30 j 18:41	8°M26'29		retrograde	-4131 Apr 13 j 07:21	6° ∡ 740'54	
max. Earth dist.	-4138 Dec 01 j 17:07		20.79030 AU	min. Earth dist.	-4131 Jun 29 j 10:41		19.01738 AU
retrograde	-4137 Mar 19 j 23:56	12° ™ 29'55		opposition	-4131 Jun 30 j 14:21	4° ∡ ¹41'26	0°-20'-34
min. Earth dist.	-4137 Jun 04 j 22:25	10° ™ 33'23	18.81508 AU	direct	-4131 Sep 14 j 02:39	2° ∡ ¹45'16	
opposition	-4137 Jun 06 j 01:56	10° ™ 30'37	0°02'03		1 3.	- *	
direct	-4137 Aug 21 j 01:49	8°M33'43		conjunction	-4131 Dec 28 j 04:22	6° ∡ ³37'36	0°-20'-10
	<u> </u>			minimum elong	-4131 Dec 28 j 04:21	6° ∡ ³37'36	0°20'21
conjunction	-4137 Dec 04 j 18:34	12°M30'14	0°00'08	max. Earth dist.	-4131 Dec 29 j 09:44		21.02689 AU
minimum elong	-4137 Dec 04 j 18:34		0°00'01	retrograde	-4130 Apr 17 j 16:01	10° ∡ 39'44	110
behind sun begin	-4137 Dec 04 j 14:26		y -	opposition	-4130 Jul 04 j 22:26	8° ∡ ⁷ 40'13	0°-24'-2
behind sun end	-4137 Dec 04 j 22:43			min. Earth dist.	-4130 Jul 03 j 18:23		19.03635 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 19 Attention, astronomical year style is used: The year -4130 in astronomical counting style is the year 4131 BCE in historical counting style.

Attention, astronon	nical year style is used: The	he year -4130	in astronomical co	unting style is the year	r 4131 BCE in historical of	counting style	·.
direct	-4130 Sep 18 j 09:04	6° ∡ ¹44'04		direct	-4122 Oct 20 j 00:31	8° ප 30'21	
conjunction	-4129 Jan 01 j 09:43	10° ∡ ³36′03	0°-23'-15	conjunction	-4121 Feb 02 j 12:43	12° る 22'59	0°-42'-49
minimum elong	-4129 Jan 01 j 09:43	10° ∡ ³36′03	0°23'26	minimum elong	-4121 Feb 02 j 12:43	12° る 22'59	0°43'01
max. Earth dist.	-4129 Jan 02 j 15:42	10° ∡ ′40′20	21.04394 AU	max. Earth dist.	-4121 Feb 03 j 11:17	12° ට 26'12	21.03187 AU
retrograde	-4129 Apr 21 j 23:26			retrograde	-4121 May 24 j 18:29	16° පි 26'05	
min. Earth dist.	-4129 Jul 08 j 02:51		19.05162 AU	opposition	-4121 Aug 10 j 11:10		0°-48'-17
opposition	-4129 Jul 09 j 06:09			min. Earth dist.	-4121 Aug 09 j 16:07		
direct	-4129 Sep 22 j 14:37			direct	-4121 Oct 24 j 05:37		
conjunction	-4128 Jan 05 j 15:04	14° × 734'05	0°-26'-13	conjunction	-4120 Feb 06 j 20:44	16°₹22'56	0°-44'-27
minimum elong	-4128 Jan 05 j 15:04			minimum elong	-4120 Feb 06 j 20:44		
max. Earth dist.	-4128 Jan 06 j 20:01			max. Earth dist.	-4120 Feb 07 j 16:43		
retrograde	-4128 Apr 25 j 07:50		21.007.10110	retrograde	-4120 May 28 j 03:52		21.007.0110
min. Earth dist.	-4128 Jul 11 j 10:01		10.06336 ATT	opposition	-4120 Aug 13 j 17:17		0°-49'-58
opposition	-4128 Jul 12 j 13:23			min. Earth dist.	-4120 Aug 12 j 23:42		
direct	-4128 Sep 25 j 19:53		0 -30 -30	direct	-4120 Oct 27 j 10:39		10.77300 AC
direct	-4120 Sep 25 j 17.55	14 × 40 22		direct	-4120 Oct 27 j 10.57	10 02743	
conjunction	-4127 Jan 08 j 20:38	100.721155	0° 20' 4	conjunction	-4119 Feb 10 j 05:18	200至22122	0° 45' 51
minimum elong	-4127 Jan 08 j 20:38			minimum elong	-4119 Feb 10 j 05:18		
				Č	-4119 Feb 10 j 03:18		
max. Earth dist.	-4127 Jan 10 j 01:57		21.00/30 AU	max. Earth dist.	,		20.97809 AU
retrograde	-4127 Apr 29 j 15:21		00 221 40	retrograde	-4119 Jun 01 j 12:15		00.511.04
opposition	-4127 Jul 16 j 20:28			opposition	-4119 Aug 17 j 23:23		
min. Earth dist.	-4127 Jul 15 j 18:01		19.07128 AU	min. Earth dist.	-4119 Aug 17 j 07:26		18.96208 AU
direct	-4127 Sep 30 j 00:49	18° ∡ ′38′14		direct	-4119 Oct 31 j 15:53	20° ර 30'10	
		_				_	
conjunction	-4126 Jan 13 j 02:16			conjunction	-4118 Feb 14 j 14:14		
minimum elong	-4126 Jan 13 j 02:16			minimum elong	-4118 Feb 14 j 14:14		
max. Earth dist.	-4126 Jan 14 j 06:17		21.07337 AU	max. Earth dist.	-4118 Feb 15 j 06:51		20.94457 AU
retrograde	-4126 May 04 j 00:29	26° ∡ ³31'45		retrograde	-4118 Jun 05 j 22:08	28° る 28'35	
min. Earth dist.	-4126 Jul 20 j 01:14	24° ₹ ³34'46	19.07528 AU	opposition	-4118 Aug 22 j 05:32		
opposition	-4126 Jul 21 j 03:18	24° ∡ °32′09	0°-36'-34	min. Earth dist.	-4118 Aug 21 j 15:08		18.92663 AU
direct	-4126 Oct 04 j 05:37	22° ∡ ³36′07		direct	-4118 Nov 04 j 21:15	24° る 31'09	
conjunction	-4125 Jan 17 j 08:27	26° ∡ ¹27'39	0°-34'-20	conjunction	-4117 Feb 18 j 23:53	28° පි 26'07	0°-48'00
minimum elong	-4125 Jan 17 j 08:27	26° ₹ 27'39	0°34'31	minimum elong	-4117 Feb 18 j 23:53	28° පි 26'07	0°48'11
max. Earth dist.	-4125 Jan 18 j 12:27	26° ∡ "31'38	21.07512 AU	max. Earth dist.	-4117 Feb 19 j 15:43	28° る 28'22	20.90725 AU
	-4125 Apr 02 j 22:51	0° ප			-4117 Mar 19 j 02:19	0° ≈	
retrograde	-4125 May 08 j 07:52	0° る 29'48		retrograde	-4117 Jun 10 j 07:09	2° ≈ 30'43	
	-4125 Jun 13 j 07:40	30°₽ ⋌ 7		opposition	-4117 Aug 26 j 11:37	0° ≈ 30′25	0°-53'-32
min. Earth dist.	-4125 Jul 24 j 09:06	28° ∡ ³32'43	19.07473 AU	min. Earth dist.	-4117 Aug 25 j 22:46	0° ≈ 31'44	18.88761 AU
opposition	-4125 Jul 25 j 09:47	28° ∡ ³30′13	0°-39'-19		-4117 Sep 07 j 22:17	30°Ŗる	
direct	-4125 Oct 08 j 10:14	26° ∡ ³34'11		direct	-4117 Nov 09 j 02:25	28° る 32'53	
	-4124 Jan 14 j 01:08	ರ°0			-4116 Jan 07 j 18:28	0° ≈	
	· ·				·		
conjunction	-4124 Jan 21 j 14:52	0°る25'52	0°-36'-43	conjunction	-4116 Feb 23 j 09:55	2° ≈ 28'39	0°-48'-44
minimum elong	-4124 Jan 21 j 14:52	0° る 25'52	0°36'56	minimum elong	-4116 Feb 23 j 09:55	2° ≈ 28'39	0°48'54
max. Earth dist.	-4124 Jan 22 j 17:01		21.07230 AU	max. Earth dist.	-4116 Feb 23 j 23:03		20.86682 AU
retrograde	-4124 May 11 j 17:35	4°る28'12	-	retrograde	-4116 Jun 13 j 17:56	6° ≈ 33'45	-
opposition	-4124 Jul 28 j 16:15		0°-41'-52	opposition	-4116 Aug 29 j 18:01	4° ≈ 33'18	0°-54'-13
min. Earth dist.	-4124 Jul 27 j 16:29		19.06943 AU	min. Earth dist.	-4116 Aug 29 j 06:42		18.84577 AU
direct	-4124 Oct 11 j 14:54	0° る 32'32	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	direct	-4116 Nov 12 j 08:18	2° ≈ 35'29	
		0 00202			11101101 12 1 00.10	2 10 30 27	
conjunction	-4123 Jan 24 j 21:38	4° る 24'28	0°-38'-57	conjunction	-4115 Feb 26 j 20:34	6° ≈ 32'08	0°-49'-13
minimum elong	-4123 Jan 24 j 21:38	4° る 24'28	0°39'09	minimum elong	-4115 Feb 26 j 20:34	6°≈32'08	0°49'22
max. Earth dist.	-4123 Jan 25 j 23:23		21.06430 AU	max. Earth dist.	-4115 Feb 27 j 09:01		20.82357 AU
retrograde	-4123 May 16 j 00:58	8°る27'02	21.00430 AO	retrograde	-4115 Jun 18 j 04:05	10°≈37'46	20.02337 AC
opposition	-4123 May 16 J 00:38	8 82702 6° 8 27'25	0°-44' 12	opposition	-4115 Sep 03 j 00:38		0°-54'-38
* *	C 3				1 3		
min. Earth dist.	-4123 Aug 01 j 00:32	6° 5 29'40 4° る 31'16	19.05871 AU	min. Earth dist.	-4115 Sep 02 j 14:46 -4115 Nov 16 j 13:48	8°≈38'15 6°≈39'08	18.80118 AU
direct	-4123 Oct 15 j 19:39	4 031.10		direct	-4113 NOV 10 J 13:48	u ≈39'U8	
aoniwti	4122 1 20:04.55	00=20100	09 401 50	aamine	4114 M 02 : 07 57	10026145	09 401 29
conjunction	-4122 Jan 29 j 04:55		0°-40'-59	conjunction	-4114 Mar 03 j 07:57		
minimum elong	-4122 Jan 29 j 04:55	8° そ 23'30		minimum elong	-4114 Mar 03 j 07:57	10°≈36'45	
max. Earth dist.	-4122 Jan 30 j 04:19		21.05093 AU	max. Earth dist.	-4114 Mar 03 j 17:30		20.77786 AU
retrograde	-4122 May 20 j 10:42		10.04054 433	retrograde	-4114 Jun 22 j 15:44		00.541.45
min. Earth dist.	-4122 Aug 05 j 08:07 -4122 Aug 06 j 04:56		19.04254 AU	opposition	-4114 Sep 07 j 07:27		
opposition	/11 / / Allor O6 1 O/1·56	10~5026'39	U*-46'-22	min. Earth dist.	-4114 Sep 06 j 23:24	12~∞43'11	18 /5426 AU
opposition	-4122 Aug 00 J 04.30	10 02037	* .* ==				10.70 .20 110

2	nical year style is used: The			· //		, 1	age 20
direct	-4114 Nov 20 j 20:21	-	in astronomical cot	retrograde	-4106 Jul 27 j 02:48		•
direct	-4114 NOV 20 J 20.21	10 🗢 43 36		=	-4106 Oct 10 j 06:46		09 451 42
agniumation	4112 Mar 07 : 20:14	1490042141	09 40! 29	opposition	•		
conjunction	-4113 Mar 07 j 20:14			min. Earth dist.	-4106 Oct 10 j 15:18		18.28332 AU
minimum elong	-4113 Mar 07 j 20:15			direct	-4106 Dec 23 j 22:29	14° π 1/33	
max. Earth dist.	-4113 Mar 08 j 04:55		20.72971 AU	. ,.	4105 A 12:02 47	100 1/ 27/10	00 401 0
. 1	-4113 Mar 12 j 20:50			conjunction	-4105 Apr 12 j 03:47		
retrograde	-4113 Jun 27 j 03:20		09 541 20	minimum elong max. Earth dist.	-4105 Apr 12 j 03:47 -4105 Apr 11 j 17:07		
opposition	-4113 Sep 11 j 14:41						20.24944 AU
min. Earth dist.	-4113 Sep 11 j 08:11		18.70483 AU	retrograde	-4105 Jul 31 j 18:56		00 421 10
1.	-4113 Nov 05 j 16:52			opposition	-4105 Oct 14 j 18:03		
direct	-4113 Nov 25 j 03:05	14°≈50'11		min. Earth dist.	-4105 Oct 15 j 03:45		18.21513 AU
	-4113 Dec 14 j 11:08	15*₩		direct	-4105 Dec 28 j 11:49	18° π30'33	
i 4 :	4112 Mar. 11:00.00	1000 050102	09 401 12	· · · · · · · · · · · · ·	4104 4 15: 22:02	220 17150	00 271 51
conjunction	-4112 Mar 11 j 09:00			conjunction	-4104 Apr 15 j 23:03		
minimum elong	3	18°≈50'02		minimum elong	-4104 Apr 15 j 23:04 -4104 Apr 15 j 09:11		
max. Earth dist.	-4112 Mar 11 j 14:34		20.07910 AU	max. Earth dist.			20.18092 AU
retrograde	-4112 Jun 30 j 15:37		00 541 14	retrograde	-4104 Aug 04 j 09:56		00 401 20
opposition	-4112 Sep 14 j 22:22			opposition	-4104 Oct 18 j 06:05		
min. Earth dist.	-4112 Sep 14 j 17:58		18.65302 AU	min. Earth dist.	-4104 Oct 18 j 18:15		18.146/5 AU
direct	-4112 Nov 28 j 10:10	18°≈57'53		direct	-4103 Jan 01 j 00:56	22° 大 5/3/	
	444434 45:00.55	222 50155	00 401 40		4102 4 20:10.26	270\/10106	00 251 10
conjunction	-4111 Mar 15 j 22:55		0°-48'-42	conjunction	-4103 Apr 20 j 19:26		
minimum elong	-4111 Mar 15 j 22:55		0°48'50	minimum elong	-4103 Apr 20 j 19:26		
max. Earth dist.	-4111 Mar 16 j 03:23		20.62601 AU	max. Earth dist.	-4103 Apr 20 j 04:31		20.11275 AU
retrograde	-4111 Jul 05 j 04:48				-4103 Jun 11 j 18:55	0° Υ	
opposition	-4111 Sep 19 j 06:23			retrograde	-4103 Aug 09 j 03:05	1° Y 24′23	
min. Earth dist.	-4111 Sep 19 j 03:45		18.59843 AU		-4103 Oct 08 j 00:34		
direct	-4111 Dec 02 j 18:44	23° ≈ 07'10		opposition	-4103 Oct 22 j 18:33	29° ₩ 22'34	
				min. Earth dist.	-4103 Oct 23 j 07:33		18.07893 AU
conjunction	-4110 Mar 20 j 13:36	27° ≈ 09'32	0°-47'-56	direct	-4102 Jan 05 j 15:55	27° ∺ 20′06	
minimum elong	-4110 Mar 20 j 13:36				-4102 Mar 29 j 17:32	$\mathbf{\gamma}_{0}$	
max. Earth dist.	-4110 Mar 20 j 14:27		20.57004 AU				
	-4110 May 13 j 09:08	0° ₩		conjunction	-4102 Apr 25 j 16:28	1° Ƴ 34'08	0°-32'-33
retrograde	-4110 Jul 09 j 17:37	1° ¥ 18'32		minimum elong	-4102 Apr 25 j 16:29	1° Y 34'08	
	-4110 Sep 06 j 11:04	30°R ≈		max. Earth dist.	-4102 Apr 24 j 22:40		20.04546 AU
opposition	-4110 Sep 23 j 15:03	29° ≈ 17'38		retrograde	-4102 Aug 13 j 19:17	5° Y 49'12	
min. Earth dist.	-4110 Sep 23 j 14:57		18.54096 AU	opposition	-4102 Oct 27 j 07:58	3° Y 47'17	
direct	-4110 Dec 07 j 02:50			min. Earth dist.	-4102 Oct 27 j 23:21		18.01244 AU
	-4109 Mar 01 j 07:48	0°)		direct	-4101 Jan 10 j 06:45	1° Ƴ 44'25	
conjunction	-4109 Mar 25 j 05:19	1° ∺ 21'47	0°-46'-53	conjunction	-4101 Apr 30 j 14:16	6° Y 00′02	0°-29'-36
minimum elong	-4109 Mar 25 j 05:19	1° ∺ 21'47	0°47'00	minimum elong	-4101 Apr 30 j 14:16	6° Y 00′02	0°29'36
max. Earth dist.	-4109 Mar 25 j 04:44		20.51094 AU	max. Earth dist.	-4101 Apr 29 j 19:31	5° Y 57'14	19.97978 AU
retrograde	-4109 Jul 14 j 08:06	5°) (31'31		retrograde	-4101 Aug 18 j 13:53	10° Y 15′52	
opposition	-4109 Sep 28 j 00:07		0°-51'-16	opposition	-4101 Oct 31 j 22:00	8° Y 13′53	0°-31'-9
min. Earth dist.	-4109 Sep 28 j 01:48		18.48026 AU	min. Earth dist.	-4101 Nov 01 j 13:51		17.94768 AU
direct	-4109 Dec 11 j 13:19	1° ∺ 30'37		direct	-4100 Jan 14 j 23:31	6° Ƴ 10'40	
	410034 20154	go\/ a =: : =	00.451.25		410035 0:::=	100000	00.24.24
conjunction	-4108 Mar 28 j 21:40		0°-45'-35	conjunction	, ,	10° Y 27'51	0°-26'-26
minimum elong	-4108 Mar 28 j 21:40	5°) 35'42		minimum elong	-4100 May 04 j 12:47	10° Y 27'51	0°26'27
max. Earth dist.	-4108 Mar 28 j 17:15		20.44886 AU	max. Earth dist.	-4100 May 03 j 15:41		19.91605 AU
retrograde	-4108 Jul 17 j 21:21	9°) 46′12		retrograde	-4100 Aug 22 j 07:29	14° Y 44′27	
opposition	-4108 Oct 01 j 09:52	7°) 45′05	0°-49'-42	opposition	-4100 Nov 04 j 12:54	12° Y 42′26	0°-27'-33
min. Earth dist.	-4108 Oct 01 j 14:10		18.41685 AU	min. Earth dist.			17.88518 AU
direct	-4108 Dec 14 j 23:01	5°) 44'46		direct	-4099 Jan 18 j 15:34	10°'Y'38'53	
	4107 4 02 11 1 1	001/2:::	00.441.1		4000 3.5 00 1.5 =	1.4000 =====	00.231.6
conjunction	-4107 Apr 02 j 14:54	9° ¥ 51'16		conjunction	-4099 May 09 j 12:07	14° Y 57'38	0°-23'-6
minimum elong	-4107 Apr 02 j 14:54	9° ¥ 51'16		minimum elong	-4099 May 09 j 12:07	14° Υ 57'38	0°23'05
max. Earth dist.	-4107 Apr 02 j 09:07		20.38418 AU	max. Earth dist.	-4099 May 08 j 13:53	14° Υ 54'18	19.85472 AU
retrograde	-4107 Jul 22 j 12:45	14°) €02'30	00.45: -0	retrograde	-4099 Aug 27 j 04:17	19° Y 15′00	00.00: 15
opposition	-4107 Oct 05 j 20:02	12° ₭ 01'15		opposition	-4099 Nov 09 j 04:31	17° Υ 12'59	0°-23'-45
min. Earth dist.	-4107 Oct 06 j 01:54		18.35097 AU	min. Earth dist.	-4099 Nov 09 j 23:09	17° Y 10′58	17.82487 AU
direct	-4107 Dec 19 j 10:59	10°) €00'31		direct	-4098 Jan 23 j 10:18	15° Y 09'08	
	4106 4 0= 100 = 1	1.40 1/ 0.000	00.40:12		4000 3.5	100000000	00 101 25
conjunction	-4106 Apr 07 j 08:54		0°-42'-13	conjunction	-4098 May 14 j 12:15	19° Y 29′27	0°-19'-35
minimum elong	-4106 Apr 07 j 08:54		0°42'17	minimum elong	-4098 May 14 j 12:15	19° Y 29'27	0°19'33
max. Earth dist.	-4106 Apr 06 j 23:25	14° 犬 07'05	20.31744 AU	max. Earth dist.	-4098 May 13 j 12:06	19 ~Y ′25'48	19.79543 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4098 in astronomical counting style is the year 4099 BCE in historical counting style. retrograde -4098 Aug 31 j 23:11 23°**Υ**47'32 min. Earth dist. -4092 Dec 11 i 20:58 19°\(232'58\) 17.46477 AU -4098 Nov 13 j 21:06 21°Υ45'33 0°-19'-46 -4091 Feb 24 j 15:13 17°\(\mathbf{2}30'04 \) opposition direct min. Earth dist. -4098 Nov 14 j 18:10 21°**Υ**43'15 17.76674 AU -4091 Jun 15 j 19:28 21°854'09 19.44439 AU max. Earth dist. -4097 Jan 28 j 03:41 19°**Υ**41'24 direct -4097 May 18 j 11:25 23°**Υ**59'20 19.73835 AU -4091 Jun 17 j 04:07 21°859'14 0°07'52 max. Earth dist. conjunction -4091 Jun 17 j 04:06 21°**8**59'13 0°08'01 minimum elong -4097 May 19 j 13:04 24° \bar{\gamma}03'14 0°-15'-56 -4091 Jun 16 j 22:05 21°858'19 conjunction behind sun begin -4091 Jun 17 j 10:07 22°**8**00'08 -4097 May 19 j 13:04 24°**Y**03'14 minimum elong 0°15'53 behind sun end -4097 Sep 05 j 21:44 28°**Y**22'01 -4091 Oct 03 j 09:13 26°**8**20'56 retrograde retrograde -4091 Dec 15 j 15:31 24°8 18'43 0°10'55 opposition -4097 Nov 18 j 14:29 26°**Υ**20'01 0°-15'-37 opposition -4091 Dec 16 j 18:42 24°815'44 17.42584 AU min. Earth dist. -4097 Nov 19 j 11:56 26°**Υ**17'41 17.71067 AU min. Earth dist. -4096 Feb 02 j 00:11 24°Υ15'36 -4090 Mar 01 j 16:42 22°**8**12'34 direct direct -4096 May 22 j 11:23 28°**Υ**34'44 19.68313 AU -4090 Jun 20 j 23:55 26° 837'41 19.40769 AU max. Earth dist. max. Earth dist. conjunction -4096 May 23 j 14:26 28°**Y**38'52 0°-12'-9 conjunction -4090 Jun 22 j 07:30 26°842'36 0°11'50 minimum elong -4096 May 23 j 14:26 28°**Υ**38'52 0°12'04 minimum elong -4090 Jun 22 j 07:29 26°**8**42'36 0°11'59 behind sun begin -4096 May 23 j 09:55 28°**Y**38'11 behind sun begin -4090 Jun 22 j 02:55 26°**8**41'54 behind sun end -4096 May 23 j 18:57 28°**Ƴ**39'32 behind sun end -4090 Jun 22 j 12:04 26°843'17 0°8 -4096 Jun 15 j 01:58 -4090 Aug 20 j 12:38 $0^{\circ}\Pi$ retrograde -4096 Sep 09 j 17:54 2°858'17 retrograde -4090 Oct 08 j 07:44 1°**I**I04'34 opposition -4096 Nov 22 j 08:54 0°**8**56'18 0°-11'-20 -4090 Nov 27 j 16:05 30°R8 min. Earth dist. -4096 Nov 23 i 08:37 0°**8**53'43 17.65651 AU opposition -4090 Dec 20 j 14:11 29°802'20 0°15'19 -4096 Dec 14 i 17:33 30°RY min. Earth dist. -4090 Dec 21 j 17:48 28° 859'18 17.39167 AU direct -4095 Feb 05 i 19:32 28° Υ 51'34 direct -4089 Mar 06 j 18:26 26°855'59 -4095 Mar 29 j 18:46 0°8 -4089 Jun 03 i 22:06 $\Pi^{\circ}0$ max. Earth dist. -4095 May 27 j 11:35 3°**8**11'47 19.63000 AU max. Earth dist. -4089 Jun 26 j 02:15 1°**Д**21'40 19.37626 AU -4095 May 28 j 16:27 3°816'12 0°-8'-16 -4089 Jun 27 j 10:44 1°**I**I26'45 0°15'44 conjunction conjunction -4095 May 28 j 16:27 3°816'12 0°08'11 minimum elong -4089 Jun 27 j 10:44 1°**Ⅱ**26'45 0°15'53 minimum elong -4095 May 28 j 10:29 -4089 Oct 13 j 06:46 behind sun begin 3°**8**15'19 5°**Ⅱ**48'58 retrograde -4095 May 28 j 22:26 3°**8**17'06 -4089 Dec 25 j 13:23 3°**II**46'42 0°19'37 behind sun end opposition 7°**8**36'13 -4095 Sep 14 j 16:52 -4089 Dec 26 j 16:33 3°**Д**43'44 17.36321 AU retrograde min. Earth dist. 1°**Ⅱ**40'11 -4095 Nov 27 j 03:49 5°**8**34'11 0°-6'-58 -4088 Mar 10 j 20:42 direct opposition -4095 Nov 28 j 03:53 max. Earth dist. -4088 Jun 30 j 07:15 5°**8**31'34 17.60443 AU 6°**Д**06'46 19.35070 AU min. Earth dist. -4094 Feb 10 j 17:48 3°**8**29'10 direct -4088 Jul 01 j 14:03 6°II11'35 0°19'32 conjunction -4088 Jul 01 j 14:02 6°**Ⅱ**11'35 -4094 Jun 02 j 19:04 7°**8**55'05 0°-4'-18 conjunction minimum elong 0°19'42 minimum elong -4094 Jun 02 j 19:05 7°**8**55'05 0°04'13 retrograde -4088 Oct 17 j 06:18 10°**II**33'59 -4094 Jun 02 j 12:24 behind sun begin 7°**8**54'06 opposition -4088 Dec 29 j 13:14 8°ДЗ1'45 0°23'48 -4094 Jun 03 j 01:45 behind sun end 7°**8**56'05 min. Earth dist. -4088 Dec 30 j 16:00 8°**Ц**28'49 17.34066 AU max. Earth dist. -4094 Jun 01 j 13:27 7°**と**50'32 19.57895 AU direct -4087 Mar 15 j 23:41 6°**Ⅲ**25'09 retrograde -4094 Sep 19 j 13:46 12°**8**15'36 max. Earth dist. -4087 Jul 05 j 10:06 10°**I**52'10 19.33132 AU -4094 Dec 01 j 23:50 10°813'33 0°-2'-31 opposition min. Earth dist. -4094 Dec 03 j 01:49 10°810'42 17.55471 AU -4087 Jul 06 j 17:16 10°**Д**57'04 0°23'13 conjunction direct -4093 Feb 15 j 15:22 8°808'13 -4087 Jul 06 j 17:16 10°**Ц**57'04 minimum elong -4087 Oct 22 i 05:42 15°**II**19'35 retrograde -4093 Jun 07 j 21:42 12°\(\arrow\) 35'19 0°00'-13 -4086 Jan 03 j 13:32 13°**Д**17'25 0°27'50 conjunction opposition -4093 Jun 07 j 21:44 12°**8**35'19 -4086 Jan 04 j 15:51 13°**Д**14'33 17.32455 AU minimum elong 0°00'08 min. Earth dist. -4093 Jun 07 j 15:08 12°**8**34'20 -4086 Mar 21 j 02:22 11°**Д**10'46 behind sun begin direct behind sun end -4093 Jun 08 j 04:20 12°836'19 max. Earth dist. -4093 Jun 06 j 14:24 12°\(\begin{aligned}
 30'29 19.53066 AU
 \end{aligned} -4086 Jul 11 i 20:30 15° **II** 43'07 0°26'45 conjunction asc. node -4093 Jun 29 j 13:34 13°**8**54'28 minimum elong -4086 Jul 11 i 20:30 15° **II** 43'07 0°26'55 -4093 Jul 19 j 01:59 15°8 max. Earth dist. -4086 Jul 10 j 15:14 15°**Д**38'30 19.31840 AU -4093 Sep 24 j 12:48 16°856'18 -4086 Oct 27 j 06:21 20°Д05'41 retrograde retrograde -4093 Dec 04 j 15:06 15°R8 -4085 Jan 08 j 14:30 18°**Ⅲ**03'39 0°31'41 opposition opposition -4093 Dec 06 j 20:23 14°854'11 0°01'58 min. Earth dist. -4085 Jan 09 j 15:44 18°**Д**00'54 17.31467 AU min. Earth dist. -4093 Dec 07 j 22:23 14°**8**51'21 17.50799 AU direct -4085 Mar 26 j 05:56 15°**耳**57'03 -4092 Feb 20 j 15:31 12°**8**48'34 direct -4092 May 04 j 11:05 15°**8** -4085 Jul 16 j 23:17 20°**Ц**29'38 0°30'06 conjunction -4092 Jun 10 j 17:46 17°**8**11'57 19.48555 AU -4085 Jul 16 j 23:17 20°**Д**29'38 0°30'16 max. Earth dist. minimum elong -4085 Jul 15 j 18:21 20°Щ25'05 19.31162 AU max. Earth dist. -4092 Jun 12 j 00:54 17°**8**16'46 0°03'52 -4085 Nov 01 j 06:33 24°**Ц**52'15 conjunction retrograde -4092 Jun 12 j 00:53 17°**8**16'46 0°03'59 -4084 Jan 13 j 15:56 22°**Д**50′20 0°35′20 minimum elong opposition -4084 Jan 14 j 16:51 22°**Д**47'38 17.31095 AU behind sun begin -4092 Jun 11 j 18:13 17°**8**15'45 min. Earth dist. behind sun end -4092 Jun 12 j 07:34 17°**8**17'46 direct -4084 Mar 30 j 08:41 20°**Ⅲ**43'48 -4092 Sep 28 j 10:15 21°838'07 max. Earth dist. -4084 Jul 19 j 22:49 25° **I**I12'13 19.31077 AU retrograde

-4092 Dec 10 j 17:37 19°\begin{align*} 35'57 0°06'27 \end{align*}

opposition

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4084 in astronomical counting style is the year 4085 BCE in historical counting style. -4084 Jul 21 j 02:03 25°**Ⅱ**16'32 0°33'15 conjunction -4076 Aug 28 j 05:21 3°Ω17'15 0°48'39 conjunction -4084 Jul 21 j 02:03 25°**Ⅲ**16'32 minimum elong -4076 Aug 28 j 05:21 3°Ω17'15 0°48'49 minimum elong 0°33'26 -4084 Nov 05 j 07:43 29°ДЗ9'04 -4076 Aug 27 j 14:57 3°**Ω**14'59 19.47639 AU retrograde max. Earth dist. -4076 Dec 13 j 01:17 -4083 Jan 17 j 17:36 27° **耳**37'18 0°38'44 7°**Ω**36'37 opposition retrograde -4083 Jan 18 j 17:02 27° **II** 34'45 17.31274 AU -4075 Feb 25 j 13:44 5°**Ω**35'23 0°54'33 min. Earth dist. opposition -4083 Apr 04 j 12:33 25°**Ⅲ**30'53 -4075 Feb 26 j 00:57 direct min. Earth dist. 5°**Ω**34'12 17.49682 AU max. Earth dist. -4083 Jul 25 j 02:09 29°**П**59'24 19.31517 AU -4075 May 13 j 22:10 direct 3°**£**30′20 -4083 Jul 25 j 05:55 0ಂತಾ 7°**Ω**57'16 0°49'10 -4075 Sep 02 j 02:26 conjunction -4075 Sep 02 j 02:26 7°**Ω**57'16 0°49'18 conjunction -4083 Jul 26 j 04:32 0°503'35 0°36'11 minimum elong -4075 Sep 01 j 15:37 minimum elong -4083 Jul 26 j 04:32 0°903'35 0°36'22 max. Earth dist. 7°**Ω**55'34 19.51804 AU -4083 Nov 10 j 08:04 -4075 Dec 17 j 21:55 $12^{\circ}\Omega$ 15'58 retrograde 4°925'59 retrograde -4082 Jan 22 j 19:55 -4074 Mar 02 j 15:43 10°**Ω**14'48 opposition 2°**5**24'20 0°41'51 opposition 0°54'55 min. Earth dist. -4082 Jan 23 j 19:10 2°**5**21'49 17.31977 AU min. Earth dist. -4074 Mar 03 j 01:15 10° Ω13'48 17.54093 AU direct -4082 Apr 09 j 15:33 0°9518'03 direct -4074 May 18 j 23:56 8°**Ω**10′02 max. Earth dist. -4082 Jul 30 j 05:32 4°9546'36 19.32466 AU conjunction -4074 Sep 06 j 22:23 12°**Ω**35'42 0°49'21 conjunction -4082 Jul 31 j 06:29 4°950'33 0°38'51 minimum elong -4074 Sep 06 j 22:23 12°**Ω**35'42 0°49'29 minimum elong -4082 Jul 31 j 06:28 4°950'33 0°39'02 max. Earth dist. -4074 Sep 06 j 13:05 12°Ω34'14 19.56474 AU retrograde -4082 Nov 15 j 09:10 9°512'44 -4074 Oct 17 j 09:52 15°Ω opposition -4081 Jan 27 j 22:26 7°511'12 0°44'41 retrograde -4074 Dec 22 j 19:38 16° Ω53'44 min. Earth dist. -4081 Jan 28 i 19:37 7°≌08'55 17.33153 AU -4073 Mar 04 i 19:24 15°RΩ direct -4081 Apr 14 j 20:36 5°905'04 opposition -4073 Mar 07 j 17:13 14°Ω52'40 0°54'56 max. Earth dist. -4081 Aug 04 j 08:43 9°533'30 19.33871 AU min. Earth dist. -4073 Mar 07 i 23:43 $14^{\circ}\Omega$ 51'59 17.59008 AU direct -4073 May 24 j 01:28 $12^{\circ}\Omega$ 48'14 -4081 Aug 05 j 08:04 9°937'12 0°41'15 -4073 Aug 05 j 19:52 15°**Ω** conjunction -4081 Aug 05 j 08:04 9°**©**37'12 minimum elong 0°41'26 -4081 Nov 20 j 08:20 13°559'06 -4073 Sep 11 j 17:45 $17^{\circ}\Omega$ 12'35 $0^{\circ}49'14$ retrograde conjunction -4080 Feb 02 j 01:08 11°557'39 0°47'13 -4073 Sep 11 j 17:45 17° Ω 12'35 0°49'21 opposition minimum elong -4080 Feb 02 j 22:05 11°\$55'24 17.34793 AU -4073 Sep 11 j 12:09 17° Ω11'43 19.61625 AU min. Earth dist. max. Earth dist. -4073 Dec 27 j 16:04 21°**Ω**29'55 -4080 Apr 19 j 00:15 9°551'40 direct retrograde -4080 Aug 08 j 10:45 14°5519'45 19.35738 AU -4072 Mar 11 j 18:11 19°**Ω**28'58 0°54'37 max. Earth dist. opposition -4072 Mar 11 j 22:43 19°**Ω**28'30 17.64370 AU min. Earth dist. -4080 Aug 09 j 08:59 14°523'16 0°43'22 -4072 May 28 j 02:16 17° **Ω**24'56 conjunction direct -4080 Aug 09 j 08:59 14°523'16 minimum elong 0°43'32 -4080 Nov 24 j 08:31 18°5544'48 -4072 Sep 15 j 12:08 21° Ω 47'55 0°48'47 retrograde conjunction -4079 Feb 06 j 03:49 16°543'25 0°49'23 -4072 Sep 15 j 12:08 21° Ω 47'55 0°48'54 opposition minimum elong -4072 Sep 15 j 08:00 21°**Ω**47'16 19.67200 AU min. Earth dist. -4079 Feb 06 j 22:21 16°541'26 17.36866 AU max. Earth dist. direct -4079 Apr 24 j 05:57 14°537'36 retrograde -4072 Dec 31 j 12:37 26°**Ω**04'33 opposition -4071 Mar 16 j 18:51 24° **Ω**03'44 0°53'56 conjunction -4079 Aug 14 j 09:21 19°508'32 0°45'10 min. Earth dist. -4071 Mar 16 j 20:46 24°**Ω**03'32 17.70134 AU -4079 Aug 14 j 09:21 19°508'32 0°45'20 -4071 Jun 02 j 01:50 22°**Ω**00'07 minimum elong direct max. Earth dist. -4079 Aug 13 j 13:26 19°505'23 19.38027 AU retrograde -4079 Nov 29 j 06:32 23°529'37 -4071 Sep 20 j 05:47 26° Ω21'41 0°48'02 conjunction -4078 Feb 11 j 06:40 21°528'17 0°51'13 -4071 Sep 20 j 05:47 $26^{\circ}\Omega$ 21'41 $0^{\circ}48'10$ opposition minimum elong -4078 Feb 12 i 00:40 21°\$26'22 17.39375 AU -4071 Sep 20 j 05:10 26° Ω 21'35 19.73133 AU min. Earth dist. max. Earth dist. -4078 Apr 29 i 10:10 19°522'38 -4071 Nov 28 i 20:17 direct 0°m -4070 Jan 05 i 08:42 retrograde 0° m 37'36 -4078 Aug 19 i 08:52 23°\$52'45 0°46'39 -4070 Feb 13 i 04:04 30°RΩ conjunction minimum elong -4078 Aug 19 i 08:52 23°\$52'45 0°46'50 $-4070 \text{ Mar } 21 \text{ i } 19:08 \quad 28^{\circ} \Omega 36'57 \quad 0^{\circ} 52'55$ opposition max. Earth dist. -4078 Aug 18 j 14:06 23°549'47 19.40771 AU min. Earth dist. -4070 Mar 21 j 18:46 $28^{\circ}\Omega$ 36'59 17.76203 AU retrograde -4078 Dec 04 j 05:45 28°513'19 direct -4070 Jun 07 j 02:16 $26^{\circ}\Omega$ 33'47 -4077 Feb 16 j 09:15 26°\$12'01 0°52'42 -4070 Sep 10 j 09:51 opposition min. Earth dist. -4077 Feb 17 j 00:27 26°\$10'24 17.42340 AU -4070 Sep 24 j 22:32 direct -4077 May 04 j 15:31 24°506'33 conjunction 0° m 53'52 0°47'00 -4070 Sep 24 j 22:33 0° m 53'52 minimum elong 0°47'05 conjunction -4077 Aug 24 j 07:33 28°535'43 0°47'49 max. Earth dist. -4070 Sep 24 j 23:25 0° m 54'00 19.79339 AU -4077 Aug 24 j 07:33 28°935'43 0°47'58 retrograde -4069 Jan 10 j 03:46 5° m 09'03 minimum elong -4077 Aug 23 j 15:53 28°533'14 19.43965 AU -4069 Mar 26 j 18:51 3° Mp 08'33 0°51'35 max. Earth dist. opposition -4077 Sep 15 j 21:45 $0^{\circ}\Omega$ -4069 Mar 26 j 16:23 3° Mp 08'48 17.82530 AU min. Earth dist. -4077 Dec 09 j 02:48 -4069 Jun 12 j 00:07 1°m/05'49 retrograde 2°**Ω**55'42 direct opposition -4076 Feb 21 j 11:46 0°**Ω**54'27 0°53'48 min. Earth dist. -4076 Feb 22 j 01:56 0°**Ω**52'56 17.45765 AU conjunction -4069 Sep 29 j 14:36 5° Mp 24'25 0°45'40 -4076 Mar 14 j 13:51 30° Rூ minimum elong -4069 Sep 29 j 14:36 5° Mp 24'25 0°45'45 direct -4076 May 08 j 18:37 28°549'10 max. Earth dist. -4069 Sep 29 j 18:36 5° To 25'0219.85755 AU -4076 Jun 30 j 15:37 $0^{\circ}\Omega$ -4068 Jan 14 j 23:10 9°m/38'51 retrograde

-4068 Mar 30 j 17:58

opposition

7° m/38'29 0°49'56

Attention astronom	ucal vaar etyla ie nead. H	10 Mar /11168	in actronomical coi		4060 RCE in historical of	ounting style	
min. Earth dist.	nical year style is used: The -4068 Mar 30 j 13:07	-	17.89004 AU	min. Earth dist.	-4060 May 05 j 12:32		
	-4068 Jun 15 j 23:42	-	17.89004 AU		-4060 May 03 j 12.32		18.411/9 AU
direct	-4008 Juli 13 j 23.42	5° Mp 36'13		direct	-4000 Jul 22 J 04.12	10 = 31 23	
conjunction	-4068 Oct 03 j 05:47	9° m 53'16	0°44'04	conjunction	-4060 Nov 06 i 02:59	1.4° Ω 3.6'0.4	0°23'34
minimum elong	-4068 Oct 03 j 05:48	9° m ₂ 53'16		minimum elong	-4060 Nov 06 j 02:59		0°23'31
max. Earth dist.	-4068 Oct 03 j 11:08		19.92280 AU	max. Earth dist.	-4060 Nov 07 j 00:10		
	3	9 11/34 03 14° M) 06'56	19.92280 AU		-4059 Feb 22 j 13:25		20.44378 AU
retrograde opposition	-4067 Jan 18 j 16:27 -4067 Apr 04 j 16:30	12° M) 06'42	0°47'59	retrograde min. Earth dist.	-4059 May 10 j 04:16		10 47506 ATT
min. Earth dist.	-4067 Apr 04 j 10:05		17.95576 AU	opposition	-4059 May 10 j 04:10		0°24'18
	-4067 Jun 20 j 20:08	12 my 07 21 10° my 04'51	17.93370 AU		-4059 Jul 26 j 16:42		0 24 16
direct	-400/Juli 20 j 20.08	10 11/04 31		direct	-4039 Jul 20 J 10.42	14 ==44 34	
conjunction	-4067 Oct 07 j 20:20	14° m) 20'20	0°42'12	conjunction	-4059 Nov 10 j 11:30	18° Ω 48'09	0°20'20
minimum elong	-4067 Oct 07 j 20:20	14° Mp 20'20	0°42'15	minimum elong	-4059 Nov 10 j 11:30		0°20'18
max. Earth dist.	-4067 Oct 08 j 04:21	-•	19.98874 AU	max. Earth dist.	-4059 Nov 11 j 10:17		
retrograde	-4066 Jan 23 j 10:29	18° m) 33'14	13.3007.110	retrograde	-4058 Feb 27 j 03:01		20.00701110
opposition	-4066 Apr 09 j 14:24	16° Mp 33'06	0°45'45	opposition	-4058 May 15 j 16:57		0°20'39
min. Earth dist.	-4066 Apr 09 j 05:23		18.02168 AU	min. Earth dist.	-4058 May 14 j 17:08		
direct	-4066 Jun 25 j 18:47	~	10.02100110	direct	-4058 Jul 31 j 06:55		10.00911110
uncet	1000 Juli 25 j 10.17	11 11/251 11		anoct	1050 Jul - 51 j 00.55	10 -30 17	
conjunction	-4066 Oct 12 j 09:53	18° m 45'35	0°40'06	conjunction	-4058 Nov 14 j 19:25	22° ≏ 58'45	0°17'01
minimum elong	-4066 Oct 12 j 09:53	18° m 45'35	0°40'09	minimum elong	-4058 Nov 14 j 19:25	22° £ 58'45	0°16'57
max. Earth dist.	-4066 Oct 12 j 19:19	18° m)47'01	20.05463 AU	max. Earth dist.	-4058 Nov 15 j 19:55	23° ≏ 02'23	20.57007 AU
retrograde	-4065 Jan 28 j 02:14	22° m 57'43		retrograde	-4057 Mar 03 j 13:54	27° Ω 05'03	
opposition	-4065 Apr 14 j 11:39	20° m 57'38	0°43'17	min. Earth dist.	-4057 May 19 j 07:49	25° Ω 07'52	18.60088 AU
min. Earth dist.	-4065 Apr 14 j 01:28		18.08753 AU	opposition	-4057 May 20 j 07:53		0°16'55
direct	-4065 Jun 30 j 13:33	18° m 56'35		direct	-4057 Aug 04 j 17:45	23° ჲ 07'15	
conjunction	-4065 Oct 16 j 22:49	23°M/08'54	0°37'47	conjunction	-4057 Nov 19 j 03:01	27° ≏ 07'58	0°13'37
minimum elong	-4065 Oct 16 j 22:49	23°M)08'54	0°37'48	minimum elong	-4057 Nov 19 j 03:01	27° ≏ 07'58	0°13'33
max. Earth dist.	-4065 Oct 17 j 10:31	23° Mp 10^\prime 41	20.12030 AU	behind sun begin	-4057 Nov 18 j 23:16	27° ₽ 07'25	
retrograde	-4064 Feb 01 j 18:20	27° My 20° 13		behind sun end	-4057 Nov 19 j 06:45	27° ჲ 08'30	
opposition	-4064 Apr 18 j 07:47	25° Mp 20° 12	0°40'34	max. Earth dist.	-4057 Nov 20 j 04:34	27° £ 11'44	20.63088 AU
min. Earth dist.	-4064 Apr 17 j 18:58	25° m 21'31	18.15287 AU		-4056 Jan 11 j 18:20	0° M	
direct	-4064 Jul 04 j 10:15	23° m 19'31		retrograde	-4056 Mar 07 j 02:44	1°M13'41	
					-4056 May 04 j 09:26	30° Ŗ Ω	
conjunction	-4064 Oct 20 j 10:48	27° m 30'14	0°35'16	opposition	-4056 May 23 j 21:51	29° ≏ 14'10	0°13'06
minimum elong	-4064 Oct 20 j 10:48	27° m 30'14	0°35'17	min. Earth dist.	-4056 May 22 j 19:42	29° ≙ 16'48	18.66051 AU
max. Earth dist.	-4064 Oct 21 j 00:05	27° m 32'15	20.18541 AU	direct	-4056 Aug 08 j 06:39	27° ≏ 16'21	
	-4064 Dec 03 j 08:34	0∘ ত			-4056 Oct 31 j 15:17	0°M	
retrograde	-4063 Feb 05 j 08:25	1° ≏ 40'46					
	-4063 Apr 15 j 05:53	30° ₹ M)		conjunction	-4056 Nov 22 j 10:12	1°M15'53	0°10'11
opposition	-4063 Apr 23 j 03:27	29° m 40'46	0°37'38			1000 15150	
min. Earth dist.		~		minimum elong	-4056 Nov 22 j 10:12	1°M15'53	0°10'05
direct	-4063 Apr 22 j 13:38	29° m/42'10	18.21788 AU	behind sun begin	-4056 Nov 22 j 04:54	1°ML15'07	0°10'05
	-4063 Jul 09 j 03:15	29° m/42'10 27° m/40'26		behind sun begin behind sun end	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30	1°M15'07 1°M16'39	
	1 3	29° m/42'10		behind sun begin behind sun end max. Earth dist.	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09	1°M15'07 1°M16'39 1°M19'51	0°10'05 20.68911 AU
	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02	29° m/42'10 27° m/40'26 0° <u>Ω</u>	18.21788 AU	behind sun begin behind sun end max. Earth dist. retrograde	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09	1°M15'07 1°M16'39 1°M19'51 5°M21'04	20.68911 AU
conjunction	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53	29° m 42'10 27° m 40'26 0° Ω 1° Ω 49'33	18.21788 AU 0°32'33	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist.	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16	20.68911 AU 18.71735 AU
minimum elong	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53	29° m/42'10 27° m/40'26 0° <u>Ω</u> 1° <u>Ω</u> 49'33 1° <u>Ω</u> 49'33	18.21788 AU 0°32'33 0°32'33	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39	20.68911 AU
minimum elong max. Earth dist.	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54	18.21788 AU 0°32'33	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist.	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16	20.68911 AU 18.71735 AU
minimum elong max. Earth dist. retrograde	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18	18.21788 AU 0°32'33 0°32'33 20.25030 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10	20.68911 AU 18.71735 AU 0°09'15
minimum elong max. Earth dist. retrograde opposition	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18 3° Ω59'20	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10	20.68911 AU 18.71735 AU 0°09'15 0°06'42
minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18 3° Ω59'20 4° Ω01'02	18.21788 AU 0°32'33 0°32'33 20.25030 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35	20.68911 AU 18.71735 AU 0°09'15
minimum elong max. Earth dist. retrograde opposition	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18 3° Ω59'20	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42	20.68911 AU 18.71735 AU 0°09'15 0°06'42
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33	29° m42'10 27° m40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18 3° Ω59'20 4° Ω01'02 1° Ω59'19	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33	29° m/42'10 27° m/40'26 0° Ω 1° Ω49'33 1° Ω49'33 1° Ω51'54 5° Ω59'18 3° Ω59'20 4° Ω01'02 1° Ω59'19	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07 -4055 Nov 27 j 20:31	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.26'38	20.68911 AU 18.71735 AU 0°09'15 0°06'42
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17	29° m42'10 27° m40'26 0° \overline{\Omega} 1° \overline{\Omega}49'33 1° \overline{\Omega}49'33 1° \overline{\Omega}51'54 5° \overline{\Omega}59'18 3° \overline{\Omega}59'20 4° \overline{\Omega}01'02 1° \overline{\Omega}59'19 6° \overline{\Omega}06'54 6° \overline{\Omega}06'54	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.26'38 9°M.27'17	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU
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minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05	29° m42'10 27° m40'26 0° •• 1° •• 1° •• 49'33 1° •• 5° •• 5° •• 5° •• 5° •• 1° •• 6° •• 6° •• 6° •• 6° •• 10° •• 1	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Aug 17 j 04:02	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.21'39 1°M.22'35 5°M.22'35 5°M.22'35 5°M.22'35 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21 0°03'11
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05 -4061 May 01 j 22:28 -4061 Jul 18 j 12:11	29° m42'10 27° m40'26 0° \(\Omega\) 1° \(\Omega\) 49'33 1° \(\Omega\) 59'18 3° \(\Omega\) 59'20 4° \(\Omega\) 01'02 1° \(\Omega\) 59'19 6° \(\Omega\) 06'54 6° \(\Omega\) 06'54 6° \(\Omega\) 06'54 6° \(\Omega\) 09'31 10° \(\Omega\) 15'57 8° \(\Omega\) 17'44 6° \(\Omega\) 16'17	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16 18.34731 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07 -4055 Nov 26 j 23:07 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Aug 17 j 04:02 -4054 Nov 30 j 23:37 -4054 Nov 30 j 23:38	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.22'35 5°M.22'35 5°M.22'35 5°M.22'42 5°M.23'28 5°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05 -4061 May 01 j 22:28 -4061 Jul 18 j 12:11	29° m42'10 27° m40'26 0° \(\oldsymbol{\Omega}\) 1° \(\oldsymbol{\Omega}\) 3° \(\oldsymbol{\Omega}\) 5° \(\oldsymbol{\Omega}\) 3° \(\oldsymbol{\Omega}\) 4° \(\oldsymbol{\Omega}\) 10° \(\oldsymbol{\Omega}\) 6° \(\oldsymbol{\Omega}\) 7' \(\oldsymbol{\Omega}\) 8° \(\oldsymbol{\Omega}\) 17' 44 6° \(\oldsymbol{\Omega}\) 6° \(\oldsymbol{\Omega}\) 16' \(\ol	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16 18.34731 AU 0°26'42	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 10:50 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Nov 30 j 23:37 -4054 Nov 30 j 23:38 -4054 Nov 30 j 17:07	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.22'35 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.26'38 9°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21 0°03'11
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde conjunction min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05 -4061 May 01 j 22:28 -4061 Jul 18 j 12:11 -4061 Nov 02 j 18:00 -4061 Nov 02 j 18:00	29° m42'10 27° m40'26 0° \(\Omega\) 1° \(\Omega\)49'33 1° \(\Omega\)5'54 5° \(\Omega\)5'9'18 3° \(\Omega\)5'9'19 6° \(\Omega\)06'54 6° \(\Omega\)06'54 6° \(\Omega\)06'54 8° \(\Omega\)15'57 8° \(\Omega\)15'57 8° \(\Omega\)16'17 10° \(\Omega\)22'22 10° \(\Omega\)22'22	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16 18.34731 AU 0°26'42 0°26'40	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun begin behind sun begin	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 10:50 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Nov 30 j 23:37 -4054 Nov 30 j 23:38 -4054 Nov 30 j 17:07 -4054 Dec 01 j 06:09	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.22'35 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.26'38 9°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21 0°03'11 0°03'05
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05 -4061 May 01 j 22:28 -4061 Jul 18 j 12:11 -4061 Nov 02 j 18:00 -4061 Nov 02 j 18:00 -4061 Nov 03 j 13:20	29° m42'10 27° m40'26 0° •• 1° •• •• •• •• •• •• •• •• •• •• •• •• ••	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16 18.34731 AU 0°26'42	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun begin behind sun begin behind sun end max. Earth dist.	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 10:50 -4055 Nov 26 j 23:07 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Aug 17 j 04:02 -4054 Nov 30 j 23:38 -4054 Nov 30 j 23:38 -4054 Nov 30 j 17:07 -4054 Dec 01 j 06:09 -4054 Dec 02 j 04:09	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21 0°03'11
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde conjunction min. Earth dist. direct	-4063 Jul 09 j 03:15 -4063 Sep 23 j 18:02 -4063 Oct 24 j 21:53 -4063 Oct 24 j 21:53 -4063 Oct 25 j 13:25 -4062 Feb 09 j 23:08 -4062 Apr 27 j 22:11 -4062 Apr 27 j 05:26 -4062 Jul 13 j 21:33 -4062 Oct 29 j 08:17 -4062 Oct 29 j 08:17 -4062 Oct 30 j 01:41 -4061 Feb 14 j 11:53 -4061 May 02 j 16:05 -4061 May 01 j 22:28 -4061 Jul 18 j 12:11 -4061 Nov 02 j 18:00 -4061 Nov 02 j 18:00	29° m42'10 27° m40'26 0° \(\Omega\) 1° \(\Omega\)49'33 1° \(\Omega\)5'54 5° \(\Omega\)5'9'18 3° \(\Omega\)5'9'19 6° \(\Omega\)06'54 6° \(\Omega\)06'54 6° \(\Omega\)06'54 8° \(\Omega\)15'57 8° \(\Omega\)15'57 8° \(\Omega\)16'17 10° \(\Omega\)22'22 10° \(\Omega\)22'22	18.21788 AU 0°32'33 0°32'33 20.25030 AU 0°34'32 18.28261 AU 0°29'42 0°29'41 20.31491 AU 0°31'16 18.34731 AU 0°26'42 0°26'40 20.37955 AU	behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun begin behind sun begin	-4056 Nov 22 j 04:54 -4056 Nov 22 j 15:30 -4056 Nov 23 j 13:09 -4055 Mar 11 j 13:09 -4055 May 27 j 09:30 -4055 May 28 j 11:29 -4055 Aug 12 j 16:23 -4055 Nov 26 j 16:58 -4055 Nov 26 j 16:58 -4055 Nov 26 j 10:50 -4055 Nov 26 j 10:50 -4055 Nov 27 j 20:31 -4054 Mar 16 j 01:03 -4054 May 31 j 20:44 -4054 Jun 02 j 00:21 -4054 Nov 30 j 23:37 -4054 Nov 30 j 23:38 -4054 Nov 30 j 17:07 -4054 Dec 01 j 06:09	1°M.15'07 1°M.16'39 1°M.19'51 5°M.21'04 3°M.24'16 3°M.21'39 1°M.24'10 5°M.22'35 5°M.22'35 5°M.21'42 5°M.23'28 5°M.26'38 9°M.27'17 7°M.30'42 7°M.27'56 5°M.30'45 9°M.28'08 9°M.28'08 9°M.28'12 9°M.28'12 9°M.29'04 9°M.32'18 13°M.32'21	20.68911 AU 18.71735 AU 0°09'15 0°06'42 0°06'36 20.74433 AU 18.77076 AU 0°05'21 0°03'11 0°03'05

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4053 in astronomical counting style is the year 4054 BCE in historical counting style. -4053 Jun 06 j 12:32 11°M 33'03 0°01'27 conjunction -4047 Dec 28 i 14:51 7°**∡**³37'36 0°-20'-33 opposition 7°**∡**³37'36 0°20'43 direct -4053 Aug 21 j 13:02 -4047 Dec 28 j 14:51 9°M36'07 minimum elong -4053 Oct 23 j 03:22 11°ML11'18 -4047 Dec 29 j 20:32 7°**∡**′41'52 21.03347 AU desc. node max. Earth dist. -4046 Apr 18 j 02:57 11°**∡**³39'37 retrograde -4053 Dec 05 j 05:59 13°MJ32'33 0°00'-24 -4046 Jul 04 j 04:07 9°**∡**42'59 19.04374 AU conjunction min. Earth dist. -4053 Dec 05 j 05:59 13°M32'33 -4046 Jul 05 j 08:37 9°**∡**¹40′08 minimum elong 0°00'33 opposition 0°-24'-27 -4046 Sep 18 j 19:14 -4053 Dec 04 j 23:27 13°ML31'37 behind sun begin direct 7°**х¹**44′03 behind sun end -4053 Dec 05 j 12:30 13°M33'28 -4045 Jan 01 j 20:09 11°**х** 35'57 max. Earth dist. -4053 Dec 06 j 10:27 13°M 36'42 20.84268 AU conjunction 0°-23'-36 -4045 Jan 01 j 20:09 11° **₹** 35'57 0°23'47 -4053 Dec 30 j 18:30 15°M minimum elong retrograde -4052 Mar 23 j 21:43 17° M 36'19 max. Earth dist. -4045 Jan 03 j 02:16 11° ₹ 40'16 21.05212 AU -4045 Apr 22 j 09:28 15° ₹37'52 min. Earth dist. -4052 Jun 08 j 19:50 15°M 39'52 18.86475 AU retrograde -4045 Jul 09 j 16:10 13°**尽** 38'24 opposition -4052 Jun 10 j 00:04 15°**M**37'03 0°-2'-25 opposition 0°-27'-46 -4052 Jun 25 j 17:02 15°RML min. Earth dist. -4045 Jul 08 j 12:41 13° ₹ 41'09 19.06057 AU direct -4052 Aug 24 j 22:54 13°M 40'19 direct -4045 Sep 23 j 00:03 11°**х** 42'23 -4052 Oct 20 j 21:02 15°M conjunction -4044 Jan 06 j 01:27 15°**尽** 34'03 0°-26'-33 conjunction -4052 Dec 08 j 11:55 17°M35'50 minimum elong -4044 Jan 06 j 01:27 15° ₹34'03 0°26'43 minimum elong -4052 Dec 08 j 11:55 17°M35'50 0°04'05 max. Earth dist. -4044 Jan 07 j 06:44 15° ₹38'14 21.06716 AU behind sun begin -4052 Dec 08 j 05:27 17° ML34'55 retrograde -4044 Apr 25 j 19:07 19° ₹35'55 behind sun end -4052 Dec 08 j 18:23 17°M 36'45 opposition -4044 Jul 12 j 23:30 17°**√**36'28 0°-30'-57 max. Earth dist. -4052 Dec 09 i 17:10 17° ML40'05 20.88495 AU min. Earth dist. -4044 Jul 11 j 19:51 17° ₹39'14 19.07364 AU -4044 Sep 26 j 06:01 15°**х** 40'31 retrograde -4051 Mar 28 j 06:15 21°M 39'12 direct min. Earth dist. -4051 Jun 13 i 07:34 19° ML42'41 18.90472 AU opposition -4051 Jun 14 j 11:08 19°M 39'55 0°-6'-16 conjunction -4043 Jan 09 i 06:50 19° ₹ 32'02 0°-29'-22 -4051 Aug 29 j 07:31 17° ML43'22 minimum elong -4043 Jan 09 i 06:50 19° ₹32'02 0°29'34 direct max. Earth dist. -4043 Jan 10 j 12:20 19° ₹36'15 21.07809 AU -4051 Dec 12 j 17:41 21°M38'02 0°-7'-24 retrograde -4043 Apr 30 j 01:57 23° ₹33'57 conjunction -4051 Dec 12 j 17:41 21°M38'02 0°07'34 -4043 Jul 16 j 04:14 21° ₹37'09 19.08244 AU min. Earth dist. minimum elong -4043 Jul 17 j 06:38 21°**х** 34'30 -4051 Dec 12 j 11:43 21°M37'12 0°-33'-59 behind sun begin opposition -4043 Sep 30 j 10:28 19° ₹38'37 -4051 Dec 12 j 23:39 21°M38'53 behind sun end direct $\hbox{-4051 Dec} \ \ 13 \ \hbox{j} \ 22 \hbox{:} 44 \quad 21 \hbox{°} \hbox{\it IL} 42 \hbox{'} 15 \quad 20.92273 \ AU$ max. Earth dist. -4042 Jan 13 j 12:35 23° ₹ 30'04 0°-32'-3 -4050 Apr 01 j 16:38 25°M-41'02 conjunction retrograde -4042 Jan 13 j 12:35 23° ₹30'04 0°32'14 -4050 Jun 18 j 21:20 23°ML41'42 0°-10'-4 opposition minimum elong -4050 Jun 17 j 16:48 23°ML44'33 18.94030 AU -4042 Jan 14 j 16:48 23° ₹34'06 21.08478 AU min. Earth dist. max. Earth dist. -4050 Sep 02 j 15:44 21°M 45'16 -4042 May 04 j 11:12 27°**✗** 32'04 direct retrograde -4042 Jul 20 j 11:21 25° ₹35'15 19.08677 AU min. Earth dist. conjunction -4050 Dec 16 j 23:13 25°ML39'11 0°-10'-48 opposition -4042 Jul 21 j 13:21 25° ₹32'38 0°-36'-52 -4050 Dec 16 j 23:13 25°M 39'11 0°10'57 direct -4042 Oct 04 j 15:49 23°**尽** 36'45 minimum elong behind sun begin -4050 Dec 16 j 18:13 25°M38'29 behind sun end -4050 Dec 17 j 04:13 25°M39'53 conjunction -4041 Jan 17 j 18:47 27°**х** 28'17 0°-34'-35 max. Earth dist. -4050 Dec 18 j 04:58 25° ML43'29 20.95607 AU minimum elong -4041 Jan 17 j 18:47 27° **₹** 28'17 0°34'47 retrograde -4049 Apr 06 j 00:05 29°M41'51 max. Earth dist. -4041 Jan 18 j 22:38 27° ₹32'15 21.08652 AU -4049 Jun 22 j 03:13 27°ML45'15 18.97162 AU -4041 Mar 06 j 16:24 0°る min. Earth dist. -4049 Jun 23 j 07:01 27°M-42'28 -4041 May 08 j 18:49 1°る30'24 opposition retrograde -4049 Sep 06 j 23:24 25° ML46'08 -4041 Jul 13 j 16:51 30°R ⊀ direct -4041 Jul 25 j 20:00 29° ₹30'58 0°-39'-34 opposition -4049 Dec 21 i 04:31 29°M-39'24 0°-14'-8 -4041 Jul 24 j 19:39 29° ₹33'25 19.08590 AU conjunction min. Earth dist. -4049 Dec 21 i 04:31 29°M-39'24 minimum elong direct -4041 Oct 08 j 20:16 27° ₹35'05 behind sun begin -4049 Dec 21 i 01:21 29°ML38'57 -4041 Dec 27 j 02:29 0°궁 behind sun end -4049 Dec 21 j 07:40 29°M39'50 max. Earth dist. -4049 Dec 22 j 09:57 29°M43'39 20.98548 AU -4040 Jan 22 j 01:08 1°**ට**26'44 0°-36'-57 conjunction -4049 Dec 27 j 03:20 -4040 Jan 22 j 01:08 1°る26'43 0°37'09 0°×7 minimum elong -4040 Jan 23 j 03:08 retrograde -4048 Apr 09 j 10:06 3°**х** 41'46 max. Earth dist. 1°る30'26 21.08302 AU min. Earth dist. -4048 Jun 25 j 11:18 1°**х** 45′13 18.99920 AU retrograde -4040 May 12 j 03:33 5°る29'01 opposition -4048 Jun 26 j 15:57 1°**∡**¹42'21 0°-17'-27 min. Earth dist. -4040 Jul 28 j 02:55 3°る31'56 19.07961 AU 0°-42'-6 -4048 Aug 17 j 15:33 30°RML opposition -4040 Jul 29 j 02:30 3°**る**29'33 -4048 Sep 10 j 06:32 29°M46'06 direct -4040 Oct 12 j 01:26 1°**る**33'35 direct -4048 Oct 03 j 12:27 0°× -4039 Jan 25 j 08:03 5°る25'27 0°-39'-8 conjunction -4048 Dec 24 j 09:45 3°**∡**138'49 0°-17'-23 -4039 Jan 25 j 08:03 conjunction minimum elong 5°**る**25'27 0°39'20 minimum elong -4048 Dec 24 j 09:44 3°**∡**38'49 0°17'34 max. Earth dist. -4039 Jan 26 j 09:17 5°る29'02 21.07380 AU max. Earth dist. -4048 Dec 25 j 15:53 3°**∡**43'09 21.01116 AU retrograde -4039 May 16 j 11:32 9°**る**27'56 retrograde -4047 Apr 13 j 17:00 7°**х** 40′58 min. Earth dist. -4039 Aug 01 j 11:11 7°る30'36 19.06749 AU min. Earth dist. -4047 Jun 29 j 20:37 5°**∡**44'19 19.02318 AU opposition -4039 Aug 02 j 08:56 7°る28'24 0°-44'-24 -4047 Jul 01 j 00:33 5°**∡**¹41'31 0°-21'00 -4039 Oct 16 j 06:02 5°る32'19 opposition direct

-4047 Sep 14 j 12:42

direct

3°**х** 45′21

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4038 in astronomical counting style is the year 4039 BCE in historical counting style. 9°**ට**24'28 0°-41'-8 -4038 Jan 29 i 15:16 conjunction -4030 Mar 03 j 17:32 11°≈35'28 0°-49'-20 conjunction minimum elong -4038 Jan 29 j 15:16 9°**ට**24'28 -4030 Mar 03 j 17:32 11°≈35'28 0°49'29 minimum elong 0°41'20 -4038 Jan 30 j 14:15 9°る27'44 21.05894 AU max. Earth dist. -4030 Mar 04 j 03:21 11°≈36′52 20.78412 AU max. Earth dist. -4038 May 20 j 20:32 13°る27'10 -4030 May 12 j 13:33 15°≈ retrograde -4030 Jun 23 j 01:13 15°≈41'40 -4038 Aug 06 j 15:13 11°₹27'32 0°-46'-31 opposition retrograde -4038 Aug 05 j 18:34 11°**궁**29'38 19.04975 AU -4030 Aug 04 j 02:23 15°R≈ min. Earth dist. -4038 Oct 20 j 11:20 -4030 Sep 07 j 17:35 13°≈41'05 0°-54'-37 direct 9°**る**31'16 opposition -4030 Sep 07 j 09:20 13°≈41'56 18.76056 AU min. Earth dist. -4030 Nov 21 j 06:43 11°**≈**42'47 conjunction -4037 Feb 02 j 22:58 13°る23'46 0°-42'-56 direct -4029 Feb 24 j 04:10 15°≈ minimum elong -4037 Feb 02 j 22:58 13°**る**23'46 0°43'07 max. Earth dist. -4037 Feb 03 j 21:02 13°중26'54 21.03840 AU -4037 May 25 j 04:17 17°る26'43 -4029 Mar 08 j 05:46 15°≈41'25 0°-49'-18 retrograde conjunction -4029 Mar 08 j 05:46 15°≈41'26 0°49'27 opposition -4037 Aug 10 j 21:17 15°**る**26'58 0°-48'-23 minimum elong min. Earth dist. -4037 Aug 10 j 02:32 15°る28'52 19.02655 AU max. Earth dist. -4029 Mar 08 j 14:31 15°≈42'41 20.73595 AU direct -4037 Oct 24 j 16:03 13°₹30'28 retrograde -4029 Jun 27 j 12:29 19°≈48'17 opposition -4029 Sep 12 j 00:47 17°≈47'40 conjunction -4036 Feb 07 j 06:54 17°る23'24 0°-44'-32 min. Earth dist. -4029 Sep 11 j 18:24 17°≈48'20 18.71092 AU minimum elong -4036 Feb 07 j 06:54 17°₹23'24 0°44'44 direct -4029 Nov 25 j 13:18 15°≈49'07 max. Earth dist. -4036 Feb 08 j 02:42 17°る26'13 21.01293 AU retrograde -4036 May 28 j 13:47 21°る26'40 conjunction -4028 Mar 11 j 18:41 19°≈48'56 0°-49'00 min. Earth dist. -4036 Aug 13 j 09:45 19°る28'32 18.99881 AU minimum elong -4028 Mar 11 j 18:41 19°≈48'56 0°49'08 opposition -4036 Aug 14 j 03:23 19°る26'45 0°-50'-2 max. Earth dist. -4028 Mar 12 j 00:13 19°≈49'44 20.68498 AU -4036 Oct 27 j 21:20 17°る30'00 direct retrograde -4028 Jul 01 i 01:34 23°≈56'31 opposition -4028 Sep 15 j 08:29 21°≈55'50 0°-53'-59 conjunction -4035 Feb 10 i 15:13 21°**♂**23'28 0°-45'-54 min. Earth dist. -4028 Sep 15 j 04:09 21°≈56'17 18.65842 AU -4035 Feb 10 j 15:13 21°る23'28 0°46'05 direct -4028 Nov 28 j 20:47 19°≈57'00 minimum elong max. Earth dist. -4035 Feb 11 j 10:19 21°る26'11 20.98300 AU retrograde -4035 Jun 01 j 21:53 25°**♂**27'04 -4027 Mar 16 j 08:35 23°≈58'04 0°-48'-27 conjunction -4035 Aug 18 j 09:28 23°る27'00 0°-51'-26 -4027 Mar 16 j 08:35 23°≈58'04 opposition minimum elong 0°48'35 -4027 Mar 16 j 12:47 23°≈58'40 20.63078 AU -4035 Aug 17 j 17:35 23°**궁**28'38 18.96686 AU min. Earth dist. max. Earth dist. -4035 Nov 01 j 02:18 21°る30'01 -4027 Jul 05 j 14:10 28°≈06'22 direct retrograde -4027 Sep 19 j 16:40 26°≈05'38 0°-53'-15 opposition -4034 Feb 15 j 00:06 25° ₹24'05 0°-47'-3 -4027 Sep 19 j 14:20 26°≈05'52 18.60246 AU conjunction min. Earth dist. -4034 Feb 15 j 00:06 25° ₹324'05 0°47'14 -4027 Dec 03 j 04:18 24°≈06'29 minimum elong direct -4034 Feb 15 j 16:53 25°る26'28 20.94934 AU max. Earth dist. -4034 Jun 06 j 07:52 29°る28'06 -4026 Mar 20 j 23:20 28°≈08'50 0°-47'-39 retrograde conjunction -4034 Aug 22 j 15:26 27°る27'53 0°-52'-35 -4026 Mar 20 j 23:20 28°≈08'50 0°47'45 opposition minimum elong min. Earth dist. -4034 Aug 22 j 00:50 27°る29'23 18.93148 AU max. Earth dist. -4026 Mar 20 j 23:49 28°≈08'55 20.57319 AU direct -4034 Nov 05 j 07:36 25°る30'36 -4026 Apr 23 j 01:33 0°**)**€ retrograde -4026 Jul 10 j 04:16 2°\ 17'54 -4033 Feb 19 j 09:37 29° පි25'25 0°-47'-59 conjunction opposition -4026 Sep 24 j 01:14 0° **★**17'02 0°-52'-13 minimum elong -4033 Feb 19j09:37 29°る25'25 0°48'09 min. Earth dist. -4026 Sep 24 j 01:18 0°¥17'02 18.54317 AU max. Earth dist. -4033 Feb 20j01:36 29°る27'42 20.91224 AU -4026 Sep 30 j 19:53 30°R≈ -4033 Mar 01 j 12:39 direct -4026 Dec 07 j 13:33 28°≈17'32 0°**≈** retrograde -4033 Jun 10 j 16:47 3°≈29'53 -4025 Feb 10 j 13:51 0°\ opposition -4033 Aug 26 j 21:39 1°≈29'33 0°-53'-29 -4033 Aug 26 j 08:43 -4025 Mar 25 i 15:01 2°\;\;21'14\ 0°-46'-34 min. Earth dist. 1°≈30'53 18.89281 AU conjunction -4033 Oct 07 j 01:56 30°Rる -4025 Mar 25 i 15:01 minimum elong 2°\f\21'14 0°46'40 direct -4033 Nov 09 j 12:57 29°る32'01 max. Earth dist. -4025 Mar 25 i 14:01 2°¥21'06 20.51221 AU -4033 Dec 12 j 11:04 0°≈ retrograde -4025 Jul 14 i 17:33 6°¥31'01 opposition -4025 Sep 28 j 10:24 4°¥30'03 0°-50'-54 -4032 Feb 23 i 19:25 3°≈27'38 0°-48'-40 min. Earth dist. -4025 Sep 28 j 12:19 4°**¥**29'51 18.48057 AU conjunction -4032 Feb 23 j 19:26 3°≈27'38 0°48'50 direct -4025 Dec 11 j 22:39 2°\ 30'10 minimum elong -4032 Feb 24 j 08:56 3°≈29'33 20.87223 AU max. Earth dist. retrograde -4032 Jun 14 j 03:22 7°≈32'38 conjunction -4024 Mar 29 j 07:09 6°\(\)435'13 0°-45'-14 opposition -4032 Aug 30 j 04:04 5°≈32'11 0°-54'-8 minimum elong -4024 Mar 29 j 07:09 6°**)**€35'13 0°45'20 min. Earth dist. -4032 Aug 29 j 16:27 5°≈33'23 18.85142 AU max. Earth dist. -4024 Mar 29 j 02:30 6°**升**34'32 20.44831 AU -4032 Nov 12 j 18:31 retrograde -4024 Jul 18 j 08:07 10°**)** 45'45 direct 3°≈34'23 -4024 Oct 01 j 20:05 8°\(\pm\)44'37 0°-49'-18 opposition -4031 Feb 27 j 06:09 7°≈30'55 0°-49'-7 min. Earth dist. -4024 Oct 02 j 00:25 8°\(\dagger44'10\) 18.41543 AU conjunction -4031 Feb 27 j 06:09 direct -4024 Dec 15 j 09:17 6°**)** 44'18 minimum elong 7°≈30'55 0°49'17 -4031 Feb 27 j 18:49 max. Earth dist. 7°≈32'44 20.82945 AU -4023 Apr 03 j 00:24 10° **X** 50'46 0°-43'-39 retrograde -4031 Jun 18 j 13:26 11°≈36'29 conjunction opposition -4031 Sep 03 j 10:38 9°**≈**35'58 0°-54'-30 minimum elong -4023 Apr 03 j 00:24 10° ¥ 50'46 0°43'43 min. Earth dist. -4031 Sep 03 j 00:44 9°**≈**37'00 18.80727 AU max. Earth dist. -4023 Apr 02 j 18:28 10° **★**49'54 20.38207 AU direct -4031 Nov 17 j 00:27 retrograde -4023 Jul 22 j 22:17 15°**₭**02'02 7°≈37'56

opposition

-4023 Oct 06 j 06:06 13° **★** 00'45 0°-47'-24

Attention actronom	ical vear style is used: Tl	16 Vear -/1023	in actronomical co	unting ctule is the year	4024 BCE in historical of	ounting style	
min. Earth dist.	-4023 Oct 06 j 12:05			min. Earth dist.	-4015 Nov 10 j 09:12		
direct	-4023 Oct 06 j 12.03 -4023 Dec 19 j 20:38		16.54624 AU	direct	-4013 Nov 10 j 09:12 -4014 Jan 23 j 19:50		17.82187 AU
direct	-4023 Dec 19 J 20.38	10 ДЗ9З9		direct	-4014 Jan 25 J 19.50	10 1 08 03	
conjunction	-4022 Apr 07 j 18:18	15°¥07'54	0° 41' 48	conjunction	-4014 May 14 j 21:40	ว∩∘∿วญวา	0°-19'-4
minimum elong	-4022 Apr 07 j 18:18			minimum elong	-4014 May 14 j 21:40		0°19'02
max. Earth dist.	-4022 Apr 07 j 08:49			max. Earth dist.	-4014 May 14 j 21:40		
			20.31427 AU				19.79200 AU
retrograde	-4022 Jul 27 j 12:52		0°-45'-14	retrograde	-4014 Sep 01 j 09:16		0°-19'-11
opposition	-4022 Oct 10 j 16:50			opposition	-4014 Nov 14 j 07:18		
min. Earth dist.	-4022 Oct 11 j 01:13		18.27997 AU	min. Earth dist.	-4014 Nov 15 j 04:26		17.76290 AU
direct	-4022 Dec 24 j 08:13	15° 大 1/14		direct	-4013 Jan 28 j 13:30	20°4'40'22	
conjunction	-4021 Apr 12 j 12:59	19° ¥ 26'38	0°-39'-43	conjunction	-4013 May 19 j 22:27	25° Y '02'12	0°-15'-24
minimum elong	-4021 Apr 12 j 12:59	19° X 26'38	0°39'46	minimum elong	-4013 May 19 j 22:27		0°15'21
max. Earth dist.	-4021 Apr 12 j 02:31			behind sun begin	-4013 May 19 j 22:27		0 1321
retrograde	-4021 Apr 12 j 02:31		20.24302 AU	behind sun end	-4013 May 19 j 20:33		
opposition	-4021 Aug 01 j 04:20		0° 42' 40	max. Earth dist.	-4013 May 20 j 00:00		10 72200 AII
min. Earth dist.	-4021 Oct 15 j 13:40				-4013 May 18 j 20:30 -4013 Sep 06 j 07:08		19.73366 AU
direct	-4021 Oct 13 j 13.40		16.21116 AU	retrograde	-4013 Sep 06 j 07.08		00 151 2
direct	-4021 Dec 28 j 21:47	19°π30'0/		opposition min. Earth dist.	·		
	4020 A 16:00 10	220 1/47/01	0°-37'-24		-4013 Nov 19 j 22:17 -4012 Feb 02 j 10:28		17.70555 AU
conjunction	-4020 Apr 16 j 08:18			direct	•		10 (7720 ATT
minimum elong	-4020 Apr 16 j 08:18		0°37'26	max. Earth dist.	-4012 May 22 j 20:40	29 1 33 43	19.67/30 AU
max. Earth dist.	-4020 Apr 15 j 18:38		20.17693 AU		401034 04:00.01	200000	00.111.25
retrograde	-4020 Aug 04 j 19:24		00 401 7	conjunction	-4012 May 24 j 00:01		0°-11'-37
opposition	-4020 Oct 18 j 15:56			minimum elong	-4012 May 24 j 00:01	29° Y 37'53	0°11'34
min. Earth dist.	-4020 Oct 19 j 03:52		18.14282 AU	behind sun begin	-4012 May 23 j 19:15	29° Y 37′10	
direct	-4019 Jan 01 j 10:31	23° ★ 56'41		behind sun end	-4012 May 24 j 04:47	29° Y 38'35	
					-4012 May 30 j 01:01	0°8	
conjunction	-4019 Apr 21 j 04:35	28° ₩ 09'07	0°-34'-51	retrograde	-4012 Sep 10 j 03:23	3° 8 57'24	
minimum elong	-4019 Apr 21 j 04:35	28° ₩ 09'07	0°34'53	opposition	-4012 Nov 22 j 19:05	1° 8 55'20	0°-10'-46
max. Earth dist.	-4019 Apr 20 j 14:03		20.10892 AU	min. Earth dist.	-4012 Nov 23 j 18:56	_	17.65001 AU
	-4019 May 23 j 08:06	0° Υ			-4011 Jan 18 j 08:13	30° ₹ Υ	
retrograde	-4019 Aug 09 j 12:39	2° Y 23′26		direct	-4011 Feb 06 j 05:45	29° Y 50′34	
opposition	-4019 Oct 23 j 04:30	0° Υ 21'32	0°-37'-11		-4011 Feb 25 j 02:09	$_{0o}$ R	
min. Earth dist.	-4019 Oct 23 j 17:19		18.07528 AU	max. Earth dist.	-4011 May 27 j 21:10	4° 8 10'48	19.62285 AU
	-4019 Oct 31 j 13:44	30° ₹ ₩					
direct	-4018 Jan 06 j 01:58	28° ∺ 19'02		conjunction	-4011 May 29 j 02:06	4° 8 15'14	0°-7'-45
	-4018 Mar 11 j 06:25	0 ° Υ		minimum elong	-4011 May 29 j 02:06	4° 8 15'14	0°07'40
max. Earth dist.	-4018 Apr 25 j 08:04	2° Y 30′26	20.04201 AU	behind sun begin	-4011 May 28 j 19:59	4° 8 14'19	
				behind sun end	-4011 May 29 j 08:12	4° 8 16'09	
conjunction	-4018 Apr 26 j 01:34	2° Y 33'02	0°-32'-5	retrograde	-4011 Sep 15 j 02:28	8° 8 35'21	
minimum elong	-4018 Apr 26 j 01:34	2° Ƴ 33'02	0°32'05				
retrograde			0 52 00	opposition	-4011 Nov 27 j 14:07	6° 8 33'15	0°-6'-24
opposition	-4018 Aug 14 j 04:43	6° Ƴ 48'08	0 32 00	opposition min. Earth dist.	-4011 Nov 27 j 14:07 -4011 Nov 28 j 14:09		0°-6'-24 17.59669 AU
* *	-4018 Aug 14 j 04:43 -4018 Oct 27 j 17:51	4° Υ 46'09	0°-34'-1		-		
min. Earth dist.		4° Υ 46'09 4° Υ 44'31		min. Earth dist.	-4011 Nov 28 j 14:09	6° 8 30'38 4° 8 28'10	
min. Earth dist. direct	-4018 Oct 27 j 17:51	4° Υ 46'09	0°-34'-1	min. Earth dist. direct	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42	6° 8 30'38 4° 8 28'10	17.59669 AU
direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08	4°Υ46'09 4°Υ44'31 2°Υ43'15	0°-34'-1 18.00922 AU	min. Earth dist. direct max. Earth dist. conjunction	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38	6°830'38 4°828'10 8°849'33 8°854'08	17.59669 AU
	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51	0°-34'-1 18.00922 AU 0°-29'-7	min. Earth dist. direct max. Earth dist.	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50	6°\dagger30'38 4°\dagger328'10 8°\dagger49'33 8°\dagger454'08 8°\dagger454'08	17.59669 AU 19.57073 AU
direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y58'51	0°-34'-1 18.00922 AU	min. Earth dist. direct max. Earth dist. conjunction	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54	6°\daysig 30'38 4°\daysig 28'10 8°\daysig 49'33 8°\daysig 54'08 8°\daysig 53'08	17.59669 AU 19.57073 AU 0°-3'-48
direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y58'51 6°Y56'07	0°-34'-1 18.00922 AU 0°-29'-7	min. Earth dist. direct max. Earth dist. conjunction minimum elong	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37	6°\dagger30'38 4°\dagger328'10 8°\dagger49'33 8°\dagger454'08 8°\dagger454'08	17.59669 AU 19.57073 AU 0°-3'-48
direct conjunction minimum elong	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y58'51	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54	6°\daysig 30'38 4°\daysig 28'10 8°\daysig 49'33 8°\daysig 54'08 8°\daysig 53'08	17.59669 AU 19.57073 AU 0°-3'-48
conjunction minimum elong max. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04	6°\dagger330'38 4°\dagger328'10 8°\dagger34'08 8°\dagger354'08 8°\dagger35'08 8°\dagger35'08 13°\dagger314'46 11°\dagger312'38	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43
conjunction minimum elong max. Earth dist. retrograde	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25	6°\dagger330'38 4°\dagger328'10 8°\dagger34'08 8°\dagger354'08 8°\dagger35'08 8°\dagger35'08 13°\dagger314'46 11°\dagger312'38	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43
conjunction minimum elong max. Earth dist. retrograde opposition	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 09'48 9°\days 07'15	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 09'48 9°\days 07'15	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 109'48 9°\days 10''	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 109'48 9°\days 10''	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 14'46 11°\days 12'38 11°\days 12'38 12°\days 108'10 13°\days 29'36	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 21:52	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist.	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 07 j 00:10	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 8°\days 55'08 13°\days 14'46 11°\days 14'238 11°\days 14'25	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 01:00	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y26'33	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 109'48 9°\days 100'15 12°\days 100'15 12°\days 100'15 13°\days 29'36 13°\days 29'36	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 07 j 00:10 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 09'48 9°\days 07'15 12°\days 08'10 13°\days 29'36 13°\days 34'25 13°\days 33'24	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 07 j 00:10 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 00:38	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 409'48 9°\days 407'15 12°\days 408'10 13°\days 425'13°\days 43'25 13°\days 43'25 13°\days 43'25 13°\days 43'25 13°\days 43'25	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 Jun 07 j 00:10 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 00:38 -4009 Jun 08 j 00:38	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 14'25 12°\days 34'25 13°\days 33'24 13°\days 35'25 15°\days 15°\day	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin behind sun begin	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 00:38 -4009 Jun 08 j 14:07 -4009 Jul 01 j 18:49	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 14'25 13°\days 34'25 13°\days 33'24 13°\days 33'24 13°\days 35'25 15°\days 17°\days 55'32	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58 -4015 Jan 19 j 00:56	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19 11°Y37'44	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00 17.88252 AU	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin behind sun begin behind sun end	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:33 -4009 Jun 08 j 07:22	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 14'46 11°\days 12'38 11°\days 14'25 13°\days 34'25 13°\days 33'24 13°\days 33'24 13°\days 35'25 15°\days 15'\days 1	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16 0°00'22
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58 -4015 Jan 19 j 00:56	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19 11°Y37'44 15°Y56'29 15°Y56'29	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00 17.88252 AU	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 55'08 11°\days 14'46 11°\days 12'38 11°\days 19'48 9°\days 10'15 12°\days 108'10 13°\days 29'36 13°\days 33'25 13°\days 33'24 13°\days 33'25 15°\days 15'\days 15'\days 15'\days 19'\days 15'\days 19'\days 15'\days 15'\days 15'\days 19'\days 15°\days 10'\days	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16 0°00'22
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58 -4015 Jan 19 j 00:56 -4015 May 09 j 21:24 -4015 May 09 j 21:24	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19 11°Y37'44 15°Y56'29 15°Y56'29	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00 17.88252 AU 0°-22'-35 0°22'34	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 14:07 -4009 Jun 08 j 14:07 -4009 Jul 01 j 18:49 -4009 Sep 24 j 22:59 -4009 Dec 07 j 06:32 -4009 Dec 08 j 08:17	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 55'08 11°\days 69'48 9°\days 607'15 12°\days 68'10 13°\days 29'36 13°\days 4'25 13°\days 33'24 13°\days 33'24 13°\days 55'32 15°\days 55'32 15°\days 55'319 15°\days 55'330 15°\days 6	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16 0°00'22
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-4018 Oct 27 j 17:51 -4018 Oct 28 j 08:56 -4017 Jan 10 j 16:08 -4017 Apr 30 j 23:26 -4017 Apr 30 j 23:26 -4017 Apr 30 j 05:07 -4017 Aug 18 j 23:45 -4017 Nov 01 j 07:55 -4017 Nov 01 j 23:36 -4016 Jan 15 j 09:13 -4016 May 04 j 21:52 -4016 May 04 j 21:52 -4016 May 04 j 01:00 -4016 Aug 22 j 17:25 -4016 Nov 04 j 22:55 -4016 Nov 05 j 16:58 -4015 Jan 19 j 00:56 -4015 May 09 j 21:24 -4015 May 09 j 21:24 -4015 May 08 j 23:26	4°Y46'09 4°Y44'31 2°Y43'15 6°Y58'51 6°Y56'07 11°Y14'44 9°Y12'42 9°Y11'00 7°Y09'29 11°Y26'38 11°Y26'38 11°Y26'38 11°Y23'31 15°Y43'19 13°Y41'16 13°Y39'19 11°Y37'44 15°Y56'29 15°Y56'29 15°Y56'29 15°Y53'11	0°-34'-1 18.00922 AU 0°-29'-7 0°29'08 19.97682 AU 0°-30'-37 17.94490 AU 0°-25'-57 0°25'56 19.91344 AU 0°-27'00 17.88252 AU 0°-22'-35 0°22'34	min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct asc. node max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-4011 Nov 28 j 14:09 -4010 Feb 11 j 04:42 -4010 Jun 01 j 22:50 -4010 Jun 03 j 04:38 -4010 Jun 03 j 04:37 -4010 Jun 02 j 21:54 -4010 Jun 03 j 11:20 -4010 Sep 19 j 23:25 -4010 Dec 02 j 10:04 -4010 Dec 03 j 12:00 -4009 Feb 16 j 01:25 -4009 May 15 j 14:47 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:23 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:22 -4009 Jun 08 j 07:23	6°\days 30'38 4°\days 28'10 8°\days 49'33 8°\days 49'33 8°\days 54'08 8°\days 55'08 13°\days 55'08 11°\days 69'48 9°\days 607'15 12°\days 68'10 13°\days 629'36 13°\days 634'25 13°\days 634'25 13°\days 635'25 15°\days 65'32 15°\days 65'32 15°\days 65'32 15°\days 65'32 15°\days 65'330 15°\days 64'38	17.59669 AU 19.57073 AU 0°-3'-48 0°03'43 0°-1'-57 17.54614 AU 19.52191 AU 0°00'16 0°00'22

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -4008 in astronomical counting style is the year 4009 BCE in historical counting style. max. Earth dist. -4008 Jun 11 j 03:26 18°8 11'06 19.47684 AU conjunction -4001 Jul 17 j 09:31 21°**Ⅱ**30'37 0°30'24 -4001 Jul 17 j 09:31 21°**Д**30'37 minimum elong 0°30'34 conjunction -4008 Jun 12 j 10:28 18°**8**15'54 0°04'20 -4001 Nov 01 j 17:10 25°**Ⅲ**53'19 retrograde -4008 Jun 12 j 10:27 18°**8**15'54 0°04'29 -4000 Jan 14 j 02:16 23°**Д**51'27 0°35'38 minimum elong opposition -4008 Jun 12 j 03:49 18°**8**14'54 behind sun begin -4000 Jan 15 j 03:04 23°**Ц**48'46 17.31251 AU min. Earth dist. -4008 Jun 12 j 17:06 18°**8**16'54 -4000 Mar 30 j 18:18 21°**Ц**44'59 behind sun end direct -4008 Sep 28 j 20:33 22°**8**37'25 max. Earth dist. -4000 Jul 20 j 09:18 26°**Д**13'29 19.31238 AU retrograde opposition min. Earth dist. -4008 Dec 12 j 06:57 20°\(\mathref{3}2'\)13 17.45628 AU conjunction -4000 Jul 21 j 12:26 26° **I**I 17'46 0°33'31 -4000 Jul 21 j 12:26 26° **П**17'46 0°33'42 direct -4007 Feb 25 j 00:16 18°**8**29'14 minimum elong -4000 Sep 28 j 17:11 max. Earth dist. -4007 Jun 16 j 05:25 22°853'28 19.43629 AU 0ಂಣ -4000 Nov 05 j 19:01 retrograde 0°5540'21 -4007 Jun 17 j 13:41 22°858'29 0°08'19 -4000 Dec 14 j 20:54 30°R II conjunction -4007 Jun 17 j 13:40 22°**8**58'29 minimum elong 0°08'27 opposition -3999 Jan 18 j 04:11 28° ДЗ8'37 0°39'00 behind sun begin -4007 Jun 17 j 07:46 22°**8**57'35 min. Earth dist. -3999 Jan 19 j 03:45 28° **I** 36'04 17.31428 AU behind sun end -4007 Jun 17 j 19:35 22°**8**59'23 direct -3999 Apr 04 j 23:01 26°**Ⅲ**32'15 retrograde -4007 Oct 03 j 20:06 27°**8**20'20 -3999 Jul 09 j 08:30 0ಂತಾ opposition -4007 Dec 16 j 01:42 25°8 18'03 0°11'24 min. Earth dist. -4007 Dec 17 j 04:21 25°815'08 17.41827 AU conjunction -3999 Jul 26 j 14:59 1°904'57 0°36'24 direct -4006 Mar 02 j 02:42 23°811'52 minimum elong -3999 Jul 26 j 14:59 1°9504'57 0°36'35 max. Earth dist. -4006 Jun 21 j 10:00 27°837'09 19.40083 AU max. Earth dist. -3999 Jul 25 j 12:24 1°500'45 19.31649 AU retrograde -3999 Nov 10 i 18:22 5°9527'22 conjunction -4006 Jun 22 j 17:09 27°**8**42'00 0°12'15 opposition -3998 Jan 23 i 06:31 3°9525'44 0°42'05 minimum elong -4006 Jun 22 i 17:09 27°**8**42'00 0°12'24 min. Earth dist. -3998 Jan 24 i 05:52 3°523'13 17.32082 AU behind sun begin -4006 Jun 22 j 12:48 27°**8**41'21 direct -3998 Apr 10 j 02:02 1°9519'27 behind sun end -4006 Jun 22 j 21:30 27°842'40 -4006 Jul 31 j 08:22 0°**Ⅱ** -3998 Jul 31 j 17:09 0°39'02 conjunction 5°951'57 -4006 Oct 08 j 17:55 2°**Ⅱ**04′08 -3998 Jul 31 j 17:09 retrograde minimum elong 5°951'57 0°39'13 -4006 Dec 21 j 00:27 0°П01'51 0°15'46 -3998 Jul 30 j 16:06 max. Earth dist. 5°547'59 19.32535 AU opposition -4006 Dec 21 j 17:20 30°R8 -3998 Nov 15 j 19:56 10°5014'07 retrograde -4006 Dec 22 j 03:36 29°858'53 17.38564 AU -3997 Jan 28 j 09:03 min. Earth dist. opposition 8°912'34 0°44'53 -4005 Mar 07 j 03:03 27°**8**55'29 -3997 Jan 29 j 06:29 min. Earth dist. 8°910'15 17.33184 AU direct -4005 May 17 j 16:17 -3997 Apr 15 j 07:36 6°906'24 Π $^{\circ}0$ direct -4005 Jun 27 j 20:19 2°II26'22 0°16'08 -3997 Aug 05 j 18:42 10°538'30 0°41'24 conjunction conjunction -4005 Jun 27 j 20:19 2°**I**126'22 0°16'17 -3997 Aug 05 j 18:42 10°538'30 0°41'34 minimum elong minimum elong -4005 Jun 26 j 12:24 2°**П**21'22 19.37115 AU -3997 Aug 04 j 19:00 10°534'45 19.33861 AU max. Earth dist. max. Earth dist. retrograde -4005 Oct 13 j 17:38 6°**Ⅱ**48'44 retrograde -3997 Nov 20 j 18:35 15°500'22 -4005 Dec 25 j 23:40 4°II46'27 0°20'03 opposition -3996 Feb 02 j 11:46 12°958'53 0°47'21 opposition min. Earth dist. -4005 Dec 27 j 02:09 4°**Д**43'34 17.35906 AU min. Earth dist. -3996 Feb 03 j 08:54 12°556'37 17.34740 AU direct -4004 Mar 11 j 06:40 2°**Ⅲ**39'58 direct -3996 Apr 19 j 10:52 10°552'50 -4004 Jul 01 j 23:50 7°**I**11'29 0°19'54 -3996 Aug 09 j 19:41 15°\$24'25 0°43'28 conjunction conjunction -4004 Jul 01 j 23:50 7°**I**11'29 0°20'03 -3996 Aug 09 j 19:41 15°\$24'25 0°43'38 minimum elong minimum elong -4004 Jun 30 j 17:34 7°**Д**06'45 19.34758 AU max. Earth dist. -3996 Aug 08 j 21:20 15°\$20'53 19.35647 AU max. Earth dist. -4004 Oct 17 j 16:29 11°**II**34'01 -3996 Nov 24 i 19:11 19°5045'53 retrograde retrograde -4004 Dec 29 i 23:26 9°**II**31'49 0°24'12 -3995 Feb 06 i 14:18 17°5044'27 0°49'29 opposition opposition -4004 Dec 31 i 01:48 9°**Ц**28'57 17.33852 AU -3995 Feb 07 i 09:04 17°542'26 17.36741 AU min. Earth dist. min. Earth dist. direct -4003 Mar 16 i 08:54 7°**Ⅱ**25'17 direct -3995 Apr 24 j 16:55 15°538'33 max. Earth dist. -4003 Jul 05 j 20:27 11°**Д**52'29 19.33018 AU -3995 Aug 14 i 20:04 20°509'27 0°45'14 conjunction -4003 Jul 07 i 03:12 11°**I**I57'19 0°23'34 -3995 Aug 14 j 20:04 20°509'27 conjunction minimum elong 0°45'24 -4003 Jul 07 j 03:12 11°**Д**57'19 0°23'43 max. Earth dist. -3995 Aug 13 j 23:58 20°506'17 19.37883 AU minimum elong -4003 Oct 22 j 16:27 16°Д19'58 retrograde retrograde -3995 Nov 29 j 16:59 24°530'28 -4002 Jan 03 j 23:51 14° **II**17'52 0°28'13 opposition opposition -3994 Feb 11 j 17:09 22°529'05 0°51'16 min. Earth dist. -4002 Jan 05 j 01:40 14° **II** 15'03 17.32421 AU min. Earth dist. -3994 Feb 12 j 11:17 22°\$27'08 17.39219 AU -4002 Mar 21 j 12:12 12°**Ⅲ**11'18 direct -3994 Apr 29 j 20:08 20°523'21 direct -4002 Jul 11 j 01:38 16°ДЗ9'12 19.31878 AU max. Earth dist. -3994 Aug 19 j 19:24 24°553'25 conjunction 0°46'40 -4002 Jul 12 j 06:27 16°**II**43'44 0°27'04 -3994 Aug 19 j 19:24 24°553'25 conjunction minimum elong 0°46'50 -4002 Jul 12 j 06:27 16°**I**I43'44 -3994 Aug 19 j 00:47 24°550'28 19.40614 AU minimum elong 0°27'13 max. Earth dist. -4002 Oct 27 j 17:09 21°**Д**06'26 retrograde retrograde -3994 Dec 04 j 16:41 29°513'56 opposition -4001 Jan 09 j 00:53 19°**I**I04'28 0°32'02 opposition -3993 Feb 16 j 19:40 27°512'34 0°52'41 min. Earth dist. -4001 Jan 10 j 01:58 19°**Ⅲ**01'44 17.31559 AU min. Earth dist. -3993 Feb 17 j 10:52 27°510'57 17.42193 AU direct -4001 Mar 26 j 15:42 16°**Ⅲ**57'57 direct -3993 May 05 j 01:47 25°507'01 max. Earth dist. -4001 Jul 16 j 04:41 21°**Д**26'04 19.31294 AU

conjunction

-3993 Aug 24 j 18:08 29°536'09 0°47'47

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -3993 in astronomical counting style is the year 3994 BCE in historical counting style. -3993 Aug 24 j 18:08 29°\$36'09 0°47'57 retrograde -3985 Jan 10 j 15:54 6° To 11'22 minimum elong max. Earth dist. -3993 Aug 24 j 02:36 29°\$33'42 19.43843 AU -3985 Mar 27 j 05:36 4° mp 10'58 0°51'14 opposition min. Earth dist. -3993 Aug 31 j 01:09 -3985 Mar 27 j 03:16 $0^{\circ}\Omega$ 4° m 11'13 17.82944 AU -3993 Dec 09 j 13:32 3°**Ω**56′06 -3985 Jun 12 j 10:52 direct 2° Mp 08'21 retrograde -3992 Feb 21 j 22:01 1°**Ω**54'48 0°53'45 opposition -3992 Feb 22 j 12:10 -3985 Sep 30 j 01:57 min. Earth dist. 1°**Ω**53'18 17.45685 AU conjunction 6° Mp 27'01 0°45'21 -3985 Sep 30 j 01:57 -3992 Apr 18 j 21:27 30°Rூ minimum elong 6° Mp 27'01 0°45'25 -3985 Sep 30 j 05:35 direct -3992 May 09 j 04:39 29°549'29 max. Earth dist. 6° № 27'35 19.86130 AU -3984 Jan 15 j 10:03 -3992 May 29 j 05:50 $0^{\circ}\Omega$ retrograde 10° Mp 41'28 opposition -3984 Mar 31 j 04:38 8° Mp 41'12 0°49'33 conjunction -3992 Aug 28 j 15:57 4°**Ω**17'34 0°48'35 min. Earth dist. -3984 Mar 31 j 00:12 8° Mp 41'40 17.89337 AU -3992 Aug 28 j 15:57 -3984 Jun 16 j 09:47 minimum elong 4°**Ω**17'34 0°48'44 direct 6°M 38'59 -3992 Aug 28 j 01:52 max. Earth dist. 4°**Ω**15'21 19.47608 AU retrograde -3992 Dec 13 j 12:03 8°**£**36′55 conjunction -3984 Oct 03 j 17:15 10° m 56'05 0°43'42 opposition -3991 Feb 26 j 00:06 6°Ω35'42 0°54'27 minimum elong -3984 Oct 03 j 17:15 10° m 56'06 0°43'46 min. Earth dist. -3991 Feb 26 j 11:03 6°**Ω**34'32 17.49712 AU max. Earth dist. -3984 Oct 03 j 22:02 10° m 56'50 19.92565 AU direct -3991 May 14 j 08:41 4°Ω30'39 retrograde -3983 Jan 19 j 04:17 15° Mp 09'45 opposition -3983 Apr 05 j 03:17 13° Mp 09'34 conjunction -3991 Sep 02 j 13:00 8°**Ω**57'36 0°49'04 min. Earth dist. -3983 Apr 04 j 21:07 13° Mp 10'12 17.95806 AU minimum elong -3991 Sep 02 j 13:00 8°Ω57'36 0°49'13 direct -3983 Jun 21 j 07:28 11° mp 07'44 max. Earth dist. -3991 Sep 02 j 02:29 8°**Ω**55'57 19.51899 AU retrograde -3991 Dec 18 i 08:33 $13^{\circ}\Omega$ 16'20 conjunction -3983 Oct 08 i 07:44 15° m 23'14 0°41'49 opposition -3990 Mar 03 i 02:07 $11^{\circ}\Omega$ 15'13 0° 54'48 minimum elong -3983 Oct 08 i 07:44 15° m 23'14 0°41'52 min. Earth dist. -3990 Mar 03 j 11:28 $11^{\circ}\Omega$ 14'14 17.54258 AU max. Earth dist. -3983 Oct 08 i 15:20 15° m 24'24 19.99048 AU direct -3990 May 19 j 10:19 9° **Ω**10'31 retrograde -3982 Jan 23 j 21:17 19° m 36'05 -3982 Apr 10 j 01:10 17° Mp 35'57 0°45'18 opposition -3990 Sep 07 j 09:09 $13^{\circ}\Omega$ 36'15 $0^{\circ}49'13$ -3982 Apr 09 j 16:35 17° Mp 36'50 18.02286 AU conjunction min. Earth dist. -3990 Sep 07 j 09:09 $13^{\circ}\Omega$ 36'15 $0^{\circ}49'21$ -3982 Jun 26 j 05:28 15° m 34'30 minimum elong direct max. Earth dist. -3990 Sep 07 j 00:05 13° **Ω**34'50 19.56709 AU -3990 Sep 29 j 22:53 15°**Ω** -3982 Oct 12 j 21:20 19° m 48'22 0°39'41 conjunction -3990 Dec 23 j 06:31 $17^{\circ}\Omega$ 54'20 -3982 Oct 12 j 21:20 19° m 48'22 0°39'43 retrograde minimum elong -3989 Mar 08 j 03:33 15°**Ω**53'21 0°54'46 -3982 Oct 13 j 06:14 19° m 49'44 20.05534 AU max. Earth dist. opposition -3989 Mar 08 j 09:47 15°**Ω**52'42 17.59306 AU -3981 Jan 28 j 12:59 24° M 00'23 min. Earth dist. retrograde -3981 Apr 14 j 22:11 22° m 00'17 0°42'47 -3989 Mar 29 j 23:31 15°RΩ opposition -3989 May 24 j 12:01 13°**Ω**49'01 -3981 Apr 14 j 12:17 22° m 01'17 18.08782 AU direct min. Earth dist. -3981 Jul 01 j 00:57 19° m 59'10 -3989 Jul 16 j 11:44 15°**Ω** direct conjunction -3989 Sep 12 j 04:34 $18^{\circ}\Omega$ 13'29 $0^{\circ}49'03$ conjunction -3981 Oct 17 j 10:07 24° m 11'24 0°37'20 -3989 Sep 12 j 04:34 18° Ω 13'29 0°49'11 minimum elong -3981 Oct 17 j 10:08 24° Mp11'24 0°37'22 minimum elong max. Earth dist. -3989 Sep 11 j 23:08 18° **Ω**12'38 19.61978 AU max. Earth dist. -3981 Oct 17 j 21:37 24° m 13'10 20.12031 AU retrograde -3989 Dec 28 j 02:36 $22^{\circ}\Omega$ 30'53 retrograde -3980 Feb 02 j 04:54 28° Mp 22'35 -3988 Mar 12 j 04:44 20° **Ω** 30'04 0° 54'24 -3980 Apr 18 j 18:22 26° M 22'30 0°40'03 opposition opposition min. Earth dist. -3988 Mar 12 j 09:13 20°Ω29'36 17.64765 AU min. Earth dist. -3980 Apr 18 j 05:51 26° M 23'47 18.15270 AU -3988 May 28 j 12:08 18°**Ω**26'09 direct -3980 Jul 04 j 21:09 24° m 21'43 direct -3988 Sep 15 j 23:02 $22^{\circ}\Omega 49'15$ $0^{\circ}48'35$ -3980 Oct 20 j 21:52 28° m 32'20 0°34'47 conjunction conjunction -3988 Sep 15 j 23:02 $22^{\circ}\Omega 49'15$ $0^{\circ}48'42$ minimum elong minimum elong -3980 Oct 20 j 21:53 28° m 32'20 0°34'47 -3988 Sep 15 j 18:56 $22^{\circ}\Omega 48'37$ 19.67627 AU max. Earth dist. max. Earth dist. -3980 Oct 21 i 10:59 28° m 34'19 20.18523 AU -3987 Jan 01 j 00:04 $27^{\circ}\Omega$ 05'58 retrograde -3980 Nov 14 i 10:04 0∘**⊽** opposition -3987 Mar 17 j 05:25 $25^{\circ}\Omega$ 05'18 $0^{\circ}53'41$ retrograde -3979 Feb 05 i 18:37 2°**-**42'42 opposition min. Earth dist. -3987 Mar 17 j 07:14 25° Ω 05'07 17.70580 AU -3979 Apr 23 j 13:53 0°**2**42'37 0°37'06 0°**2**44'02 18.21786 AU direct -3987 Jun 02 j 12:24 23°**Ω**01'48 min. Earth dist. -3979 Apr 23 j 00:07 -3979 May 11 j 09:02 30°R M -3979 Jul 09 j 14:12 28° m 42'10 conjunction -3987 Sep 20 j 16:54 27°**Ω**23'30 0°47'48 direct 0∘**⊽** minimum elong -3987 Sep 20 j 16:54 $27^{\circ}\Omega 23'30$ 0°47'53 -3979 Sep 03 j 12:05 max. Earth dist. -3987 Sep 20 j 16:14 $27^{\circ}\Omega 23'24$ 19.73589 AU -3987 Nov 04 j 13:33 0° m conjunction -3979 Oct 25 j 08:58 2°**£**51'12 0°32'04 -3986 Jan 05 j 19:36 1°My39'29 -3979 Oct 25 j 08:58 retrograde minimum elong 2°**£**51'12 0°32'04 -3986 Mar 13 j 18:38 30°RΩ -3979 Oct 26 j 00:37 max. Earth dist. 2°**♀**53'34 20.25057 AU -3986 Mar 22 j 05:48 29° Ω 38'58 0°52'37 -3978 Feb 10 j 09:37 opposition retrograde 7°**£**00'47 min. Earth dist. -3986 Mar 22 j 05:38 29°Ω38'59 17.76659 AU opposition -3978 Apr 28 j 08:26 5°**⊆**00'43 0°33'59 direct -3986 Jun 07 j 11:39 27°**Ω**35'56 min. Earth dist. -3978 Apr 27 j 15:45 5°**♀**02'25 18.28333 AU -3986 Aug 24 j 03:50 direct -3978 Jul 14 j 08:18 3°**£**00'37 conjunction -3986 Sep 25 j 09:41 1° Mp 56'07 0°46'43 conjunction -3978 Oct 29 j 19:12 7°**2**08'07 0°29'12 minimum elong -3986 Sep 25 j 09:41 1° m 56'07 0°46'48 -3978 Oct 29 j 19:12 7°**♀**08'07 0°29'11 minimum elong

max. Earth dist.

-3986 Sep 25 j 10:17

1° Mp 56'13 19.79779 AU

max. Earth dist.

-3978 Oct 30 j 12:35

7°**2**10'43 20.31614 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -3977 in astronomical counting style is the year 3978 BCE in historical counting style. -3977 Feb 14 i 22:06 11° **2**16'56 opposition -3970 Jun 02 j 10:26 8°M28'26 0°04'47 retrograde -3977 May 02 j 08:36 9°**2**18'44 18.34911 AU direct -3970 Aug 17 j 14:15 min. Earth dist. 6°M31'16 -3977 May 03 j 02:19 0°30'42 opposition 9°**Ω**16'56 -3977 Jul 18 j 23:03 -3970 Dec 01 j 10:24 10°M28'40 0°02'40 direct 7°**£**17'12 conjunction -3970 Dec 01 j 10:24 10°ML28'40 0°02'34 minimum elong -3977 Nov 03 j 04:53 11°**2**23'13 0°26'11 -3970 Dec 01 j 03:52 10°M27'44 conjunction behind sun begin -3977 Nov 03 j 04:53 11°**2**23'13 0°26'09 -3970 Dec 01 j 16:56 10°M29'35 minimum elong behind sun end max. Earth dist. -3977 Nov 04 j 00:24 11°**2**26'09 20.38193 AU max. Earth dist. -3970 Dec 02 j 14:18 10°M32'44 20.79868 AU retrograde -3976 Feb 19 j 12:12 15°**△**31'19 retrograde -3969 Mar 20 j 20:19 14°M-32'49 opposition -3976 May 06 j 19:08 13°**೨**31'25 0°27'17 opposition -3969 Jun 06 j 22:41 12°M-33'34 0°00'54 min. Earth dist. -3976 May 05 j 22:37 13°**△**33'29 18.41475 AU min. Earth dist. -3969 Jun 05 j 20:00 12°M 36'14 18.82248 AU -3976 Jul 22 j 14:51 11°**2**32'04 -3969 Aug 21 j 23:06 10°M36'38 direct direct -3969 Aug 31 j 10:39 10°M38'54 desc. node conjunction -3976 Nov 06 j 13:52 15°**Ω**36'40 0°23'03 minimum elong -3976 Nov 06 j 13:52 15°**2**36'40 0°23'01 conjunction -3969 Dec 05 j 16:35 14°MJ33'01 0°00'-55 max. Earth dist. -3976 Nov 07 j 11:02 15°**2**39'50 20.44734 AU minimum elong -3969 Dec 05 j 16:35 14°M33'02 0°01'03 retrograde -3975 Feb 22 j 23:48 19°**£**44'07 behind sun begin -3969 Dec 05 j 10:03 14°M232'06 opposition -3975 May 11 j 11:35 17°**♀**44'18 0°23'44 behind sun end -3969 Dec 05 j 23:07 14°M33'57 min. Earth dist. -3975 May 10 j 14:22 17°**2**46'27 18.47991 AU max. Earth dist. -3969 Dec 06 j 20:43 14°MJ37'08 20.84459 AU direct -3975 Jul 27 j 03:50 15°**£**45'22 -3969 Dec 13 j 09:32 15°M retrograde -3968 Mar 24 j 07:50 18° ML36'43 conjunction -3975 Nov 10 j 22:17 19°**2**48'36 0°19'49 min. Earth dist. -3968 Jun 09 i 06:03 16° ML 40'16 18.86614 AU minimum elong -3975 Nov 10 i 22:17 19° **△**48'36 0°19'46 opposition -3968 Jun 10 j 10:05 16° ML 37'27 0°-2'-57 max. Earth dist. -3975 Nov 11 i 21:13 19° **2**52'01 20.51205 AU -3968 Jul 28 i 08:56 15°RM retrograde -3974 Feb 27 j 13:18 23°**£**55'25 direct -3968 Aug 25 j 09:32 14°M 40'42 -3974 May 15 j 03:23 21° **2**58'07 18.54390 AU -3968 Sep 21 j 20:12 15°ML min. Earth dist. opposition -3974 May 16 j 03:07 21°**2**55'44 0°20'04 -3974 Jul 31 j 17:34 19°**≏**57'12 conjunction -3968 Dec 08 j 22:27 18°MJ36'11 direct 0°-4'-26 -3968 Dec 08 j 22:28 18°MJ36'11 minimum elong 0°04'35 -3968 Dec 08 j 16:02 18°M35'17 -3974 Nov 15 j 06:17 23°**2**59'08 0°16'29 conjunction behind sun begin -3968 Dec 09 j 04:53 18°M37'06 -3974 Nov 15 j 06:17 23°**2**59'08 0°16'26 behind sun end minimum elong -3974 Nov 16 j 06:37 24°**Ω**02'44 20.57511 AU -3968 Dec 10 j 03:17 18° ML40'22 20.88603 AU max. Earth dist. max. Earth dist. -3973 Mar 04 j 00:06 28°**♀**05'21 retrograde -3967 Mar 28 j 15:55 22°M39'28 retrograde -3973 May 20 j 17:55 26°**♀**05'47 0°16'20 -3967 Jun 14 j 21:00 20° ML40'09 0°-6'-47 opposition opposition -3973 May 19 j 18:04 26°**2**08'11 18.60604 AU -3967 Jun 13 j 17:40 20°M42'53 18.90557 AU min. Earth dist. min. Earth dist. -3973 Aug 05 j 04:56 24°**♀**07'39 -3967 Aug 29 j 16:54 18°M43'33 direct direct conjunction -3973 Nov 19 j 13:53 28° **2**08'21 0°13'06 conjunction -3967 Dec 13 j 04:00 22°M38'10 0°-7'-51 -3973 Nov 19 j 13:53 28°**♀**08'21 0°13'01 minimum elong -3967 Dec 13 j 03:59 22°M38'10 0°08'00 minimum elong behind sun begin -3973 Nov 19 j 09:50 28°**♀**07'46 behind sun begin -3967 Dec 12 j 22:07 22°M37'20 behind sun end -3973 Nov 19 j 17:56 28°**♀**08'56 behind sun end -3967 Dec 13 j 09:52 22°M39'00 max. Earth dist. -3973 Nov 20 j 15:21 28° **2**12'07 20.63606 AU max. Earth dist. -3967 Dec 14 j 09:02 22°ML42'23 20.92352 AU -3973 Dec 22 j 04:29 retrograde -3966 Apr 02 j 02:05 26°M41'03 -3972 Mar 07 j 12:56 min. Earth dist. -3966 Jun 18 j 02:35 24°ML44'33 18.94115 AU retrograde 2°MJ14'01 -3972 May 23 j 06:07 0°**M** 17'10 18.66559 AU -3966 Jun 19 j 07:06 24°ML41'42 0°-10'-33 min. Earth dist. opposition -3966 Sep 03 i 02:34 22° ML45'13 opposition -3972 May 24 j 08:02 0°M14'34 0°12'31 direct -3972 May 30 i 09:31 30°R **△** -3966 Dec 17 j 09:24 26° ML39'05 0°-11'-13 direct -3972 Aug 08 i 17:03 28° **2**16'47 conjunction -3972 Oct 12 j 23:23 0°M minimum elong -3966 Dec 17 i 09:23 26°M 39'05 0°11'23 behind sun begin -3966 Dec 17 i 04:34 26°ML38'24 -3972 Nov 22 i 20:56 2°M16'19 0°09'39 behind sun end -3966 Dec 17 j 14:13 26° M 39'45 conjunction -3972 Nov 22 i 20:57 2°M16'19 0°09'34 max. Earth dist. -3966 Dec 18 j 15:05 26°ML43'22 20.95715 AU minimum elong -3972 Nov 22 j 15:29 -3965 Feb 23 j 15:22 0°**√** behind sun begin 2°M-15'33 behind sun end -3972 Nov 23 j 02:24 2°M17'06 retrograde -3965 Apr 06 j 09:47 0°**х** 41′37 2°M20'14 20.69396 AU max. Earth dist. -3972 Nov 23 j 23:31 -3965 May 19 j 08:30 30°RM retrograde -3971 Mar 11 j 22:57 6°ML21'28 opposition -3965 Jun 23 j 16:32 28°M42'13 0°-14'-15 opposition -3971 May 28 j 21:42 4°M22'07 0°08'40 min. Earth dist. -3965 Jun 22 j 12:47 28°M 45'00 18.97311 AU min. Earth dist. -3971 May 27 j 20:01 4°M24'41 18.72189 AU direct -3965 Sep 07 j 08:49 26°M 45'50 2°M24'40 -3965 Dec 10 j 06:55 direct -3971 Aug 13 j 03:14 0° ×7 0°**₹**39'02 0°-14'-32 -3971 Nov 27 j 03:52 6°M23'06 0°06'10 -3965 Dec 21 j 14:35 conjunction conjunction minimum elong -3971 Nov 27 j 03:51 6°M23'06 0°06'05 minimum elong -3965 Dec 21 j 14:35 0°**х** 39′02 0°14'41 behind sun begin -3971 Nov 26 j 21:38 6°M22'12 behind sun begin -3965 Dec 21 j 11:45 0°**х**³38'38 behind sun end -3971 Nov 27 j 10:05 6°M23'59 behind sun end -3965 Dec 21 j 17:26 0°**х** 39′26 max. Earth dist. -3971 Nov 28 j 07:03 6°M27'05 20.74843 AU max. Earth dist. -3965 Dec 22 j 20:18 0°**∡**'43'19 20.98747 AU -3970 Mar 16 j 11:28 10°M27'44 -3964 Apr 09 j 19:00 4°**∡**¹41'17 retrograde retrograde min. Earth dist. -3970 Jun 01 j 07:07 8°M231'11 18.77438 AU min. Earth dist. -3964 Jun 25 j 20:37 2°**҂**¹44'45 19.00180 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -3964 in astronomical counting style is the year 3965 BCE in historical counting style. -3964 Jun 27 i 01:27 2°**₹**41'52 0°-17'-53 min. Earth dist. -3956 Jul 28 i 12:29 4°る30'06 19.08757 AU opposition -3964 Sep 10 j 16:48 0°**∡**¹45'35 direct -3956 Oct 12 j 11:09 2°る31'47 direct -3964 Dec 24 j 19:33 4°**₹**38'13 0°-17'-45 -3955 Jan 25 j 17:40 6°**ට**23'30 0°-39'-18 conjunction conjunction -3964 Dec 24 j 19:33 -3955 Jan 25 j 17:40 4°**∡**°38'13 0°17'55 6°る23'30 0°39'29 minimum elong minimum elong -3964 Dec 26 j 01:52 4°**≯**42'35 21.01441 AU -3955 Jan 26 j 18:38 6°る27'03 21.08146 AU max. Earth dist. max. Earth dist. -3963 Apr 14 j 02:31 retrograde 8°**х** 40′16 retrograde -3955 May 16 j 20:42 10°る25'50 -3963 Jun 30 j 06:00 min. Earth dist. 6°**∡**¹43'37 19.02713 AU opposition -3955 Aug 02 j 18:28 8°**る**26'19 0°-44'-34 -3963 Jul 01 j 10:01 0°-21'-24 opposition 6°**х** 40′49 min. Earth dist. -3955 Aug 01 j 20:56 8°る28'30 19.07482 AU 4°**∡**¹44'38 direct -3963 Sep 14 j 22:32 direct -3955 Oct 16 j 15:31 6°**ප**30'14 -3963 Dec 29 j 00:42 8°**∡**136'49 0°-20'-54 -3954 Jan 30 j 00:47 10°る22'13 0°-41'-16 conjunction conjunction -3963 Dec 29 j 00:42 -3954 Jan 30 j 00:47 10°**♂**22'13 minimum elong 8°**∡**³36'49 0°21'04 minimum elong 0°41'26 max. Earth dist. -3963 Dec 30 j 06:42 8°**≯**41'07 21.03813 AU max. Earth dist. -3954 Jan 30 j 23:49 10°₹25'30 21.06607 AU retrograde -3962 Apr 18 j 11:30 12°**渘**38'42 retrograde -3954 May 21 j 06:18 14°る24'46 opposition -3962 Jul 05 j 17:54 10°**∡**³39'15 0°-24'-49 min. Earth dist. -3954 Aug 06 j 03:53 12°₹27'14 19.05673 AU min. Earth dist. -3962 Jul 04 j 13:11 10°**∡**¹42'07 19.04911 AU opposition -3954 Aug 07 j 00:30 12°₹25'09 0°-46'-38 8°**х** 43′10 direct -3962 Sep 19 j 04:45 direct -3954 Oct 20 j 21:09 10°る28'53 conjunction -3961 Jan 02 j 05:52 12° ₹ 35'00 0°-23'-56 conjunction -3953 Feb 03 j 08:15 14°る21'14 0°-43'-2 minimum elong -3961 Jan 02 j 05:52 12° ₹35'00 0°24'06 minimum elong -3953 Feb 03 j 08:15 14°る21'14 0°43'13 max. Earth dist. -3961 Jan 03 j 12:05 12° ₹ 39'20 21.05817 AU max. Earth dist. -3953 Feb 04 i 06:20 14°る24'23 21.04539 AU retrograde -3961 Apr 22 j 18:46 16° ₹ 36'47 retrograde -3953 May 25 j 13:28 18°る24'03 min. Earth dist. -3961 Jul 08 j 22:00 14° ₹ 40'07 19.06725 AU min. Earth dist. -3953 Aug 10 j 11:54 16°る26'12 19.03366 AU -3961 Jul 10 i 01:36 14° ₹ 37'21 0°-28'-6 -3953 Aug 11 j 06:36 16°**る**24'18 0°-48'-28 opposition opposition -3961 Sep 23 j 09:56 12° ₹ 41'22 -3953 Oct 25 j 01:37 14°る27'50 direct direct -3960 Jan 06 j 11:03 16° ₹ 32'56 0°-26'-51 -3952 Feb 07 j 15:52 18°る20'37 0°-44'-35 conjunction conjunction -3960 Jan 06 j 11:03 16° **₹** 32'56 0°27'03 -3952 Feb 07 j 15:52 18°る20'37 0°44'45 minimum elong minimum elong -3960 Jan 07 j 16:36 16° ₹37'10 21.07441 AU -3952 Feb 08 j 12:03 18°る23'30 21.02023 AU max. Earth dist. max. Earth dist. -3960 Apr 26 j 03:56 20°**尽** 34'42 -3952 May 28 j 22:44 22°る23'46 retrograde retrograde -3960 Jul 12 j 05:01 18°**₰** 38'05 19.08138 AU opposition -3952 Aug 14 j 12:36 20°₹23'52 0°-50'-4 min. Earth dist. -3960 Jul 13 j 08:56 18° **₹** 35'17 0°-31'-16 -3952 Aug 13 j 18:45 20°₹25'41 19.00642 AU min. Earth dist. opposition -3952 Oct 28 j 07:08 18°₹27'10 -3960 Sep 26 j 15:21 16° ₹39'23 direct direct -3951 Feb 11 j 00:09 22°る20'31 0°-45'-56 -3959 Jan 09 j 16:33 20°**∡** 30'48 0°-29'-39 conjunction conjunction -3959 Jan 09 j 16:33 20°**x** 30'48 0°29'49 -3951 Feb 11 j 00:09 22°**궁**20'31 0°46'07 minimum elong minimum elong max. Earth dist. -3959 Jan 10 j 22:00 20° **₹** 35'00 21.08626 AU max. Earth dist. -3951 Feb 11 j 19:27 22°**궁**23'16 20.99098 AU retrograde -3959 Apr 30 j 11:12 24°**尽** 32'35 retrograde -3951 Jun 02 j 06:50 26°₹24'02 opposition -3959 Jul 17 j 16:03 22°**х** 33'12 0°-34'-17 opposition -3951 Aug 18 j 18:33 24°る24'01 0°-51'-26 min. Earth dist. -3959 Jul 16 j 13:39 22°**x** 35'51 19.09094 AU min. Earth dist. -3951 Aug 18 j 02:32 24°중25'39 18.97534 AU -3959 Sep 30 j 20:00 20° **₹**'37'21 -3951 Nov 01 j 11:37 22°**♂**27'05 direct direct -3958 Jan 13 j 22:21 24° ₹728'43 0°-32'-18 -3950 Feb 15 j 08:56 26°る21'04 0°-47'-3 conjunction conjunction -3958 Jan 13 j 22:21 24° ₹728'43 0°32'30 -3950 Feb 15 j 08:56 26° ₹21'04 0°47'13 minimum elong minimum elong -3958 Jan 15 i 02:35 24° ₹32'45 21.09346 AU -3950 Feb 16 j 02:04 26°る23'30 20.95828 AU max. Earth dist. max. Earth dist. -3958 May 04 j 21:00 28° ₹30'35 -3950 May 05 j 12:48 retrograde -3958 Jul 21 j 22:53 26° ₹31'12 0°-37'-8 opposition retrograde -3950 Jun 06 i 16:35 0°≈25'00 -3958 Jul 20 j 20:47 26° ₹33'50 19.09551 AU min. Earth dist. -3950 Jul 09 i 05:10 30°Rる direct -3958 Oct 05 j 01:19 24° ₹35'22 min. Earth dist. -3950 Aug 22 j 09:34 28°る26'24 18.94096 AU opposition -3950 Aug 23 j 00:36 28°る24'52 0°-52'-34 -3957 Jan 18 i 04:32 28° ₹26'47 0°-34'-48 direct -3950 Nov 05 j 17:11 26°る27'41 conjunction -3957 Jan 18 j 04:32 28° ₹26'47 0°34'59 -3949 Feb 13 j 05:01 minimum elong 0°≈ -3957 Jan 19 j 08:06 28° ₹30'42 21.09517 AU max. Earth dist. -3957 Feb 15 j 03:45 0°ਰ conjunction -3949 Feb 19 j 18:15 0°≈22'25 0°-47'-57 -3957 May 09 j 03:57 retrograde 2°る28'45 minimum elong -3949 Feb 19 j 18:15 0°≈22'25 0°48'07 min. Earth dist. -3957 Jul 25 j 05:19 0°る31'48 19.09440 AU max. Earth dist. -3949 Feb 20 j 10:25 0°≈24'43 20.92220 AU -3957 Jul 26 j 05:30 0°る29'22 0°-39'-48 -3949 Jun 11 j 01:24 opposition retrograde 4°≈26'49 -3957 Aug 07 j 12:16 30°R ✓ -3949 Aug 27 j 06:45 opposition 2°≈26'36 0°-53'-26

-3949 Aug 26 j 17:31

-3949 Nov 09 j 21:51

-3948 Feb 24 j 04:07

-3948 Feb 24 j 04:07

-3948 Feb 24 j 17:56

-3948 Jun 14 j 12:18

-3948 Aug 30 j 13:07

2°≈27'57 18.90333 AU

4°≈26'42 20.88325 AU

6°≈29'22 0°-54'-3

0°-48'-37

0°48'47

0°≈29'11

4°≈24'44

4°**≈**24'44

8°≈29'41

min. Earth dist.

conjunction

retrograde

opposition

minimum elong

max. Earth dist.

direct

-3957 Oct 09 j 05:35

-3957 Dec 07 j 19:24

-3956 Jan 22 j 10:58

-3956 Jan 22 j 10:58

-3956 Jan 23 j 12:50

-3956 May 12 j 13:56

-3956 Jul 29 j 12:02

direct

conjunction

retrograde

opposition

minimum elong

max. Earth dist.

28°×33'30

2°**る**25'02

6°る27'10

2°**ට**25'02 0°-37'-9

4°る27'44 0°-42'-17

2°る28'43 21.09129 AU

0°37'20

0°궁

•	omena of Uranus fr		•			, .	age 31
	nical year style is used: Th	-					
min. Earth dist.	-3948 Aug 30 j 01:03		18.86290 AU	max. Earth dist.	-3940 Mar 29 j 10:59		20.45418 AU
direct	-3948 Nov 13 j 03:45	4° ≈ 31'43		retrograde	-3940 Jul 18 j 15:33		00 401 55
				opposition	-3940 Oct 02 j 05:03	9°) 40′59	0°-48'-57
conjunction	-3947 Feb 27 j 14:45	8°≈28'10	0°-49'-3	min. Earth dist.	-3940 Oct 02 j 09:21		18.42090 AU
minimum elong	-3947 Feb 27 j 14:45	8°≈28'10	0°49'12	direct	-3940 Dec 15 j 19:01	7°) 40′38	
max. Earth dist.	-3947 Feb 28 j 03:33		20.84130 AU				
retrograde	-3947 Jun 18 j 22:21	12°≈33'42		conjunction	-3939 Apr 03 j 08:42		
opposition	-3947 Sep 03 j 19:46	10° ≈ 33'19		minimum elong	-3939 Apr 03 j 08:43		0°43'25
min. Earth dist.	-3947 Sep 03 j 09:42		18.81937 AU	max. Earth dist.	-3939 Apr 03 j 02:50		20.38726 AU
direct	-3947 Nov 17 j 09:05	8° ≈ 35'26		retrograde	-3939 Jul 23 j 06:09		
				opposition	-3939 Oct 06 j 15:04		
conjunction	-3946 Mar 04 j 02:09	12° ≈ 32'54	0°-49'-14	min. Earth dist.	-3939 Oct 06 j 21:05		18.35325 AU
minimum elong	-3946 Mar 04 j 02:09	12° ≈ 32'54	0°49'23	direct	-3939 Dec 20 j 05:58	11° 米 55′50	
max. Earth dist.	-3946 Mar 04 j 12:12		20.79638 AU				
	-3946 Apr 18 j 19:49	15° ≈		conjunction	-3938 Apr 08 j 02:24		0°-41'-28
retrograde	-3946 Jun 23 j 10:14	16° ≈ 39'03		minimum elong	-3938 Apr 08 j 02:24		
	-3946 Aug 30 j 11:05	15°R ≈		max. Earth dist.	-3938 Apr 07 j 17:06		20.31919 AU
opposition	-3946 Sep 08 j 02:35	14° ≈ 38'36	0°-54'-28	retrograde	-3938 Jul 27 j 20:54		
min. Earth dist.	-3946 Sep 07 j 18:10	14° ≈ 39′29	18.77282 AU	opposition	-3938 Oct 11 j 01:35	18° ¥ 13'52	0°-44'-51
direct	-3946 Nov 21 j 15:39	12° ≈ 40′27		min. Earth dist.	-3938 Oct 11 j 09:42	18°) 13′00	18.28496 AU
	-3945 Feb 07 j 01:20	15° ≈		direct	-3938 Dec 24 j 17:45	16°) 12'37	
conjunction	-3945 Mar 08 j 14:27	16° ≈ 39′01	0°-49'-10	conjunction	-3937 Apr 12 j 20:59	20°) 21′49	0°-39'-22
minimum elong	-3945 Mar 08 j 14:27	16° ≈ 39′01	0°49'17	minimum elong	-3937 Apr 12 j 20:59	20°) 21′49	0°39'25
max. Earth dist.	-3945 Mar 08 j 23:11	16° ≈ 40′16	20.74810 AU	max. Earth dist.	-3937 Apr 12 j 10:47	20°) €20'19	20.25073 AU
retrograde	-3945 Jun 27 j 21:46	20° ≈ 45'49		retrograde	-3937 Aug 01 j 12:24	24°) € 34′28	
opposition	-3945 Sep 12 j 09:57	18° ≈ 45'19	0°-54'-16	opposition	-3937 Oct 15 j 12:45	22°) 32′48	0°-42'-24
min. Earth dist.	-3945 Sep 12 j 03:42	18° ≈ 45'58	18.72278 AU	min. Earth dist.	-3937 Oct 15 j 22:09	22°) 31′48	18.21654 AU
direct	-3945 Nov 25 j 22:15	16° ≈ 46'54		direct	-3937 Dec 29 j 05:45	20°) 31′09	
					-		
conjunction	-3944 Mar 12 j 03:18	20°≈46'36	0°-48'-50	conjunction	-3936 Apr 16 j 16:04	24°) 41′52	0°-37'-2
minimum elong	-3944 Mar 12 j 03:18	20°≈46'36	0°48'58	minimum elong	-3936 Apr 16 j 16:05		0°37'04
max. Earth dist.	-3944 Mar 12 j 08:53	20° ≈ 47'24	20.69638 AU	max. Earth dist.	-3936 Apr 16 j 02:42		
retrograde	-3944 Jul 01 j 10:26	24°≈54'07		retrograde	-3936 Aug 05 j 04:25		
opposition	-3944 Sep 15 j 17:44	22°≈53'31	0°-53'-47	opposition	-3936 Oct 19 j 00:39		0°-39'-42
min. Earth dist.	-3944 Sep 15 j 13:26			min. Earth dist.	-3936 Oct 19 j 12:05		
direct	-3944 Nov 29 j 05:45			direct	-3935 Jan 01 j 19:09		
	,				,		
conjunction	-3943 Mar 16 j 17:20	24°≈55'41	0°-48'-15	conjunction	-3935 Apr 21 j 12:21	29°) €03'47	0°-34'-28
minimum elong	-3943 Mar 16 j 17:20		0°48'22	minimum elong	-3935 Apr 21 j 12:21		0°34'29
max. Earth dist.	-3943 Mar 16 j 21:18		20.64085 AU	max. Earth dist.	-3935 Apr 20 j 22:09		20.11520 AU
retrograde	-3943 Jul 05 j 23:10	29°≈03'53			-3935 May 07 j 10:11	0°Υ	
opposition	-3943 Sep 20 i 01:52		0°-53'00	retrograde	-3935 Aug 09 j 21:01	3° Υ 18'03	
min. Earth dist.	-3943 Sep 19 j 23:51		18.61175 AU	opposition	-3935 Oct 23 j 13:05	1° Υ 16'11	0°-36'-45
direct	-3943 Dec 03 j 14:10		10.01173710	min. Earth dist.	-3935 Oct 24 j 01:35		18.08189 AU
uncet	37 13 Dec 03 j 1 1.10	25 70.0105		mm. Darur dist.	-3935 Nov 24 j 10:24		10.00107110
conjunction	-3942 Mar 21 j 08:03	29° ≈ 06'15	0°-47'-25	direct	-3934 Jan 06 j 09:08	29° ¥ 13'46	
minimum elong	-3942 Mar 21 j 08:03	29°≈06'15	0°47'31	direct	-3934 Feb 17 j 19:23	0° Υ	
max. Earth dist.	-3942 Mar 21 j 08:03		20.58171 AU		575 1100 1/ j 17.23	V 1	
max. Darui dist.	-3942 Nrai 21 j 08:24 -3942 Apr 05 j 22:07	0° \	_0.501/1710	conjunction	-3934 Apr 26 j 09:16	3° Y 27'39	0°-31'-41
retrograde	-3942 Jul 10 j 12:18	3°) 15′10		minimum elong	-3934 Apr 26 j 09:16	3° Υ 27'39	0°31'43
opposition	-3942 Sep 24 j 10:31	1° H 14'18	0° 51' 56	max. Earth dist.	-3934 Apr 25 j 16:02		20.04898 AU
min. Earth dist.	-3942 Sep 24 j 10:39		18.55088 AU	retrograde	-3934 Apr 23 j 10:02 -3934 Aug 14 j 14:00	7° Υ 42'46	20.04898 AU
iiiii. Eattii tist.	-3942 Scp 24 j 10:39 -3942 Oct 26 j 05:37	30°R≈	16.55066 AU	•	-3934 Aug 14 j 14:00 -3934 Oct 28 j 02:29	5° Υ 40'50	0°-33'-34
direct	-3942 Oct 26 j 03.37 -3942 Dec 07 j 22:55	30 k≈ 29°≈14'49		opposition min. Earth dist.	-3934 Oct 28 j 17:07	5° Υ 39'16	18.01641 AU
direct	-					3° Y 38'04	18.01041 AU
	-3941 Jan 19 j 00:20	0° ∀		direct	-3933 Jan 11 j 00:03	o 158'04	
agniver -ti	2041 M 25 : 22 22	20W 10110	00 461 10	aanivr-+:	2022 M 01 : 06 50	700052124	00 201 42
conjunction	-3941 Mar 25 j 23:30	3°) 18'18		conjunction	-3933 May 01 j 06:58	7° Y 53'34	0°-28'-42
minimum elong	-3941 Mar 25 j 23:30	3°) 18'18	0°46'25	minimum elong	-3933 May 01 j 06:58	7° Y 53'34	
max. Earth dist.	-3941 Mar 25 j 22:22		20.51921 AU	max. Earth dist.	-3933 Apr 30 j 13:02	7° Υ 50'54	19.98417 AU
retrograde	-3941 Jul 15 j 01:52	7° H 27'55	00.501.25	retrograde	-3933 Aug 19 j 08:13	12° Υ 09'30	00.201.0
opposition	-3941 Sep 28 j 19:35	5°) (26'54		opposition	-3933 Nov 01 j 16:33	10° Υ 07'33	0°-30'-9
min. Earth dist.	-3941 Sep 28 j 21:43		18.48692 AU	min. Earth dist.	-3933 Nov 02 j 08:03		17.95224 AU
direct	-3941 Dec 12 j 08:52	3°) €27'00		direct	-3932 Jan 15 j 16:24	8°Υ04'28	10.05055
	204075 25::-	mo\/	00.44	max. Earth dist.	-3932 May 04 j 08:44	12°'Y'18'28	19.92066 AU
conjunction	-3940 Mar 29 j 15:37	7°) € 31'49	0°-44'-57		2022 7 5 5 5 5 5	100000	00.05.5
minimum elong	-3940 Mar 29 j 15:37	7°) 31′49	0°45'02	conjunction	-3932 May 05 j 05:32	12°' y' 21'35	0°-25'-31

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -3932 in astronomical counting style is the year 3933 BCE in historical counting style. $-3932 \text{ May } 05 \text{ j } 05:32 \quad 12^{\circ} \Upsilon^{\circ} 21'35 \quad 0^{\circ} 25'31$ conjunction -3925 Jun 08 j 14:34 14°**8**28'49 minimum elong -3932 Aug 23 j 02:12 16°**Υ**38'18 -3925 Jun 08 j 14:34 14°**8**28'49 0°00'48 retrograde minimum elong opposition -3932 Nov 05 j 07:24 14°**Υ**'36'21 0°-26'-31 -3925 Jun 08 j 07:48 14°**8**27'48 behind sun begin -3932 Nov 06 j 01:22 14°**Y**34'24 17.88946 AU -3925 Jun 08 j 21:20 14°**8**29'50 min. Earth dist. behind sun end -3931 Jan 19 j 08:54 12°**Y**32'56 -3925 Jun 17 j 00:54 15°8 direct -3931 May 09 j 07:14 16°**Υ**48'22 -3925 Sep 25 j 06:04 18°849'52 max. Earth dist. 19.85843 AU retrograde -3925 Dec 07 j 14:32 16°**8**47'32 opposition 0°02'55 $-3931 \text{ May } 10 \text{ j } 05:07 \quad 16^{\circ} \Upsilon 51'39$ -3925 Dec 08 j 16:13 16°844'43 17.49670 AU conjunction 0°-22'-9 min. Earth dist. -3931 May 10 j 05:06 16°**Υ**51'39 minimum elong 0°22'08 -3924 Jan 25 j 22:38 15°**₹**8 -3931 Aug 27 j 22:25 21°**Y**′09'09 -3924 Feb 21 j 09:55 14°**8**41'45 retrograde direct -3931 Nov 09 j 23:09 19°**Υ**07'10 opposition 0°-22'-41 -3924 Mar 18 j 16:49 15°**8** min. Earth dist. -3931 Nov 10 j 17:56 19°**Y**05'08 17.82774 AU -3924 Jun 11 j 10:44 19°**8**05'05 19.47420 AU max. Earth dist. -3930 Jan 24 j 03:44 17°**Υ**03'26 direct max. Earth dist. -3930 May 14 j 04:47 21°**Υ**20'00 19.79717 AU conjunction -3924 Jun 12 j 17:37 19°**8**09'52 0°04'42 minimum elong -3924 Jun 12 j 17:37 19°**8**09'52 0°04'49 conjunction $-3930 \text{ May } 15 \text{ j } 05:16 \quad 21^{\circ} \Upsilon 23'42$ 0°-18'-38 behind sun begin -3924 Jun 12 j 11:01 19°**8**08'52 minimum elong -3930 May 15 j 05:16 21°**Υ**23'42 0°18'35 behind sun end -3924 Jun 13 j 00:13 19°**8**10'51 retrograde -3930 Sep 01 j 17:25 25°**Y**41'56 retrograde -3924 Sep 29 j 03:38 23°**8**31'18 opposition -3930 Nov 14 j 15:51 23°**Υ**'39'56 0°-18'-41 opposition -3924 Dec 11 j 11:39 21°**8**28'55 min. Earth dist. -3930 Nov 15 j 13:05 23°**Y**37'37 17.76720 AU min. Earth dist. -3924 Dec 12 j 14:41 21°825'58 17.45362 AU direct -3929 Jan 28 j 21:50 21°**Y**35'51 direct -3923 Feb 25 j 09:00 19°822'51 max. Earth dist. -3929 May 19 i 04:28 25°**Y**53'42 19.73730 AU conjunction -3923 Jun 17 j 20:45 23°₩51'58 0°08'39 conjunction -3929 May 20 i 06:10 25°**Y**'57'36 0°-14'-58 minimum elong -3923 Jun 17 j 20:45 23°**8**51'58 0°08'48 -3923 Jun 17 j 14:57 23°**8**51'06 -3929 May 20 j 06:10 25°**Υ**57'36 0°14'55 behind sun begin minimum elong $-3929 \text{ May } 20 \text{ i } 03:56 \quad 25^{\circ} \Upsilon 57'17$ behind sun end -3923 Jun 18 j 02:33 23°852'51 behind sun begin -3929 May 20 j 08:23 25°**Y**57'56 -3923 Jun 16 j 12:54 23°847'02 19.43371 AU behind sun end max. Earth dist. -3929 Aug 13 j 00:54 -3923 Oct 04 j 02:55 28°813'47 0° 8 retrograde -3929 Sep 06 j 15:18 0°816'30 -3923 Dec 16 j 09:28 26°811'22 0°11'46 opposition retrograde -3929 Oct 01 j 09:49 30°RY -3923 Dec 17 j 11:48 26°808'29 17.41588 AU min. Earth dist. -3929 Nov 19 j 09:12 28°Υ 14'27 0°-14'-33 -3922 Mar 02 j 10:16 24°**8**05'05 opposition direct -3929 Nov 20 j 06:55 28°**Υ**12'05 17.70806 AU -3922 Jun 21 j 17:15 28°\dagger30'19 19.39868 AU min. Earth dist. max. Earth dist. -3928 Feb 02 j 18:38 26°**Y**10'01 direct -3928 May 15 j 05:21 -3922 Jun 23 j 00:02 28°**8**35'06 0°12'34 0°8 conjunction -3928 May 23 j 03:55 0°**8**29'00 19.67895 AU max. Earth dist. minimum elong -3922 Jun 22 j 19:52 28°**8**34'28 behind sun begin -3928 May 24 j 07:37 0°833'13 0°-11'-11 -3922 Jun 23 j 04:13 28°**8**35'44 conjunction behind sun end minimum elong -3928 May 24 j 07:36 0°**8**33'13 0°11'07 -3922 Jul 16 j 01:10 0°**Ⅱ** behind sun begin -3928 May 24 j 02:38 0°**8**32'28 retrograde -3922 Oct 09 j 01:31 2°**I**57'12 behind sun end -3928 May 24 j 12:35 0°**8**33'57 opposition -3922 Dec 21 j 08:06 0°**Д**54'50 0°16'07 retrograde -3928 Sep 10 j 11:26 4°**8**52'44 min. Earth dist. -3922 Dec 22 j 11:02 0°**Д**51'53 17.38384 AU -3928 Nov 23 j 03:30 2°850'37 0°-10'-17 -3921 Jan 11 j 23:03 30°R ₩ opposition min. Earth dist. -3928 Nov 24 j 03:31 2°848'00 17.65078 AU -3921 Mar 07 j 11:07 28°848'25 direct -3927 Feb 06 j 14:23 0°845'49 -3921 Apr 29 j 14:14 direct $0^{\circ}\Pi$ max. Earth dist. -3927 May 28 j 04:41 5°805'57 19.62283 AU max. Earth dist. -3921 Jun 26 j 19:48 3°**Ⅱ**14'17 19.36973 AU -3921 Jun 28 i 03:21 3°**П**19'12 0°16'26 conjunction -3927 May 29 j 09:38 5°810'23 0°-7'-19 conjunction -3927 May 29 i 09:37 -3921 Jun 28 i 03:21 minimum elong 5°810'23 0°07'15 minimum elong 3°**Ⅱ**19'12 0°16'34 -3927 May 29 i 03:25 behind sun begin 5°**と**09'27 retrograde -3921 Oct 14 i 00:58 7°**Ⅱ**41'35 behind sun end -3927 May 29 i 15:50 5°811'18 opposition -3921 Dec 26 i 07:08 5°**Ⅲ**39'15 0°20'22 retrograde -3927 Sep 15 j 10:01 9°830'27 min. Earth dist. -3921 Dec 27 j 09:14 5°**Ⅲ**36'24 17.35800 AU -3927 Nov 27 j 22:20 7°**8**28'16 0°-5'-55 direct -3920 Mar 11 j 13:17 3°**Ⅲ**32'44 opposition -3927 Nov 28 j 22:30 7°**と**25'38 17.59595 AU max. Earth dist. -3920 Jul 01 j 00:58 7°**Ц**59'33 19.34686 AU min. Earth dist. direct -3926 Feb 11 j 12:39 5°**8**23'07 -3920 Jul 02 j 06:57 max. Earth dist. -3926 Jun 02 j 06:09 9°**8**44'22 19.56943 AU conjunction 8°**I**04'15 0°20'11 minimum elong -3920 Jul 02 j 06:57 8°**Ⅲ**04'15 0°20'20 conjunction -3926 Jun 03 j 12:04 9°848'58 0°-3'-23 retrograde -3920 Oct 18 j 00:37 12°**Ⅲ**26'48 -3926 Jun 03 j 12:04 9°**8**48'58 0°03'18 -3920 Dec 30 j 07:01 10°**II**24'36 0°24'30 minimum elong opposition -3926 Jun 03 j 05:20 9°847'57 -3920 Dec 31 j 09:17 10°**II**21'44 17.33805 AU behind sun begin min. Earth dist. -3926 Jun 03 j 18:49 9°**8**49'58 -3919 Mar 16 j 15:42 8°**Ⅱ**18'04 behind sun end direct -3926 Sep 20 j 07:07 14°**8**09'33 -3919 Jul 06 j 03:47 12°**Д**45'20 19.32987 AU retrograde max. Earth dist. -3926 Dec 02 j 18:11 12°807'17 0°-1'-30 opposition min. Earth dist. -3926 Dec 03 j 20:11 12°**8**04'27 17.54434 AU conjunction -3919 Jul 07 j 10:20 12°**Ⅲ**50'08 0°23'49 minimum elong direct -3925 Feb 16 j 10:04 10°**8**01'48 -3919 Jul 07 j 10:20 12°**Ⅲ**50'08 0°23'58 asc. node -3925 Apr 08 j 21:35 11°**8**09'08 retrograde -3919 Oct 23 j 00:30 17°**Ⅲ**12'51 max. Earth dist. -3925 Jun 07 j 07:37 14°**8**24'03 19.51974 AU -3918 Jan 04 j 07:26 15° **Ⅱ**10'46 0°28'29 opposition

min. Earth dist.

-3918 Jan 05 j 09:02 15°**Д**07'58 17.32395 AU

Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, Attention, astronomical year style is used: The year -3918 in astronomical counting style is the year 3919 BCE in historical counting style. -3918 Mar 21 j 19:01 13°**Д**04'14 direct direct -3910 Apr 30 i 03:32 21°517'33 -3918 Jul 11 j 09:08 17°**Ⅲ**32'13 19.31847 AU -3910 Aug 19 j 08:39 25°5544'45 19.40219 AU max. Earth dist. max. Earth dist. -3918 Jul 12 j 13:51 17°**Д**36'44 0°27'18 -3910 Aug 20 j 03:08 25°5047'40 0°46'39 conjunction conjunction -3918 Jul 12 j 13:51 17° **∏**36'44 0°27'29 minimum elong -3910 Aug 20 j 03:08 25°547'40 0°46'49 minimum elong -3918 Oct 28 j 00:55 21° II 59'31 -3910 Nov 17 j 21:13 retrograde 0 $^{\circ}\Omega$ -3917 Jan 09 j 08:31 19°**Ⅲ**57'35 0°32'17 -3910 Dec 05 j 00:30 opposition retrograde 0°**Ω**08'12 -3917 Jan 10 j 09:43 19° **II**54'50 17.31517 AU -3910 Dec 22 j 07:16 min. Earth dist. 30°R∽ -3909 Feb 17 j 03:05 direct -3917 Mar 26 j 22:42 17°**Ⅲ**51'07 opposition 28°506'48 0°52'39 -3909 Feb 17 j 18:10 28°505'12 17.41833 AU max. Earth dist. -3917 Jul 16 j 11:57 22°**Д**19'17 19.31226 AU min. Earth dist. direct -3909 May 05 j 09:05 26°901'12 -3917 Jul 17 j 16:56 22° **II**23'51 0°30'36 -3909 Aug 17 j 01:04 conjunction 0° Ω -3917 Jul 17 j 16:56 22°**Ⅲ**23'51 -3909 Aug 24 j 10:16 minimum elong 0°30'46 max. Earth dist. 0°**Ω**27'56 19.43522 AU retrograde -3917 Nov 02 j 01:11 26°**Ⅲ**46'39 opposition -3916 Jan 14 j 10:03 24°**Ц**44'49 0°35'52 conjunction -3909 Aug 25 j 01:51 0°Ω30'24 0°47'45 min. Earth dist. -3916 Jan 15 j 10:47 24°**II**42'08 17.31151 AU minimum elong -3909 Aug 25 j 01:51 0°**Ω**30'24 0°47'53 direct -3916 Mar 31 j 02:14 22°**耳**38'24 retrograde -3909 Dec 09 j 21:15 4°**Ω**50′22 opposition -3908 Feb 22 j 05:31 2°**Ω**49'03 0°53'41 conjunction -3916 Jul 21 j 20:02 27°**Ⅲ**11'16 0°33'42 min. Earth dist. -3908 Feb 22 j 19:31 2°**Ω**47'34 17.45411 AU minimum elong -3916 Jul 21 j 20:02 27°**Ⅲ**11'16 0°33'52 direct -3908 May 09 j 11:46 0°**Ω**43'42 max. Earth dist. -3916 Jul 20 j 16:48 27°**Д**06'58 19.31095 AU -3916 Sep 07 i 20:35 0°5 conjunction -3908 Aug 28 i 23:42 5°Ω11'51 0°48'31 -3916 Nov 06 i 02:11 1°533'57 minimum elong -3908 Aug 28 i 23:42 5°Ω11'51 0°48'40 retrograde -3915 Jan 07 i 17:17 30°R **II** max. Earth dist. -3908 Aug 28 i 09:43 5°**Ω**09'39 19.47382 AU opposition -3915 Jan 18 j 11:56 29° **I** 32'15 0°39'12 retrograde -3908 Dec 13 j 20:10 9°**Ω**31'14 min. Earth dist. -3915 Jan 19 j 11:41 29°**I**I29'40 17.31245 AU -3907 Feb 26 j 07:33 7°Ω30'00 0°54'22 opposition -3915 Apr 05 j 06:35 27°**Ⅲ**25'54 -3907 Feb 26 j 18:17 7°**Ω**28'52 17.49533 AU direct min Earth dist -3915 Jun 24 j 14:17 0°5 -3907 May 14 j 15:54 5°**Ω**24'57 direct -3915 Jul 26 j 22:41 -3907 Sep 02 j 20:55 9°Ω52'00 0°48'58 conjunction 1°958'42 0°36'34 conjunction -3915 Jul 26 j 22:41 -3907 Sep 02 j 20:55 9°**Ω**52'00 0°49'06 1°958'42 0°36'44 minimum elong minimum elong -3915 Jul 25 j 19:45 -3907 Sep 02 j 10:20 9° **Ω**50'20 19.51768 AU max. Earth dist. 1°954'26 19.31424 AU max. Earth dist. -3915 Nov 11 j 02:32 -3907 Dec 18 j 16:33 14°**Ω**10'46 6°921'14 retrograde retrograde -3906 Mar 03 j 09:36 12°**Ω**09'41 0°54'40 -3914 Jan 23 j 14:19 4°9519'36 0°42'15 opposition opposition 4°517'05 17.31814 AU -3906 Mar 03 j 18:58 12°**Ω**08'42 17.54164 AU -3914 Jan 24 j 13:38 min. Earth dist. min. Earth dist. -3914 Apr 10 j 09:52 -3906 May 19 j 17:20 10° Ω05'00 direct 2°9513'20 direct -3914 Jul 30 j 23:38 max. Earth dist. 6°541'55 19.32224 AU conjunction -3906 Sep 07 j 17:04 $14^{\circ}\Omega$ 30'49 $0^{\circ}49'06$ conjunction -3914 Aug 01 j 00:47 6°545'54 0°39'10 minimum elong -3906 Sep 07 j 17:04 $14^{\circ}\Omega$ 30'49 $0^{\circ}49$ '13 minimum elong -3914 Aug 01 j 00:47 6°545'54 0°39'19 max. Earth dist. -3906 Sep 07 j 07:59 14°**Ω**29'24 19.56644 AU retrograde -3914 Nov 16 j 03:42 11°508'11 -3906 Sep 15 j 10:54 15°**Ω** -3913 Jan 28 j 16:49 9°506'37 0°45'00 -3906 Dec 23 j 14:54 18° **Ω**48'58 opposition retrograde min. Earth dist. -3913 Jan 29 j 14:22 9°504'18 17.32834 AU -3905 Mar 08 j 11:07 $16^{\circ}\Omega$ 48'01 $0^{\circ}54'37$ opposition -3913 Apr 15 j 14:58 7°9500'27 min. Earth dist. -3905 Mar 08 j 17:24 16° **Ω**47'22 17.59249 AU direct max. Earth dist. -3913 Aug 05 j 02:26 11°528'50 19.33480 AU -3905 Apr 29 j 08:09 15°RΩ direct $-3905 \text{ May } 24 \text{ i } 19:18 \quad 14^{\circ} \Omega 43'43$ -3913 Aug 06 j 02:26 11°\$32'38 0°41'29 -3905 Jun 18 i 18:56 15°Ω conjunction -3913 Aug 06 j 02:26 11°532'38 minimum elong 0°41'40 -3913 Nov 21 i 02:47 15°554'34 -3905 Sep 12 j 12:42 19° Ω 08'17 0°48'55 retrograde conjunction -3912 Feb 02 i 19:20 13°\$53'04 0°47'26 minimum elong -3905 Sep 12 i 12:42 19° Ω 08'17 0°49'01 opposition min. Earth dist. -3912 Feb 03 j 16:31 13°550'47 17.34333 AU max. Earth dist. -3905 Sep 12 j 07:04 19° Ω 07'24 19.61923 AU direct -3912 Apr 19 j 18:07 11°5546'59 retrograde -3905 Dec 28 j 11:01 23° Ω 25'44 max. Earth dist. -3912 Aug 09 j 05:07 16°515'07 19.35225 AU -3904 Mar 12 j 12:19 $21^{\circ}\Omega$ 24'58 $0^{\circ}54'13$ opposition min. Earth dist. -3904 Mar 12 j 17:13 21°**Ω**24'27 17.64699 AU conjunction -3912 Aug 10 j 03:28 16°5518'39 0°43'31 direct -3904 May 28 j 19:57 19°**Ω**21'04 minimum elong -3912 Aug 10 j 03:28 16°5518'39 0°43'41 retrograde -3912 Nov 25 j 03:21 20°540'10 conjunction -3904 Sep 16 j 07:24 23°**Ω**44'17 0°48'24 -3911 Feb 06 j 21:57 18°938'42 0°49'31 -3904 Sep 16 j 07:25 23° Ω 44'17 0°48'30 opposition minimum elong -3911 Feb 07 j 16:45 18°536'41 17.36310 AU -3904 Sep 16 j 03:01 23° Ω 43'36 19.67541 AU min. Earth dist. max. Earth dist. -3903 Jan 01 j 08:15 28° **Ω**01'03 direct -3911 Apr 24 j 23:56 16°€32'45 retrograde -3903 Mar 17 j 13:13 $26^{\circ}\Omega00'26$ $0^{\circ}53'28$ max. Earth dist. -3911 Aug 14 j 07:29 21°500'31 19.37453 AU opposition min. Earth dist. -3903 Mar 17 j 15:20 26°Ω00'12 17.70459 AU conjunction -3911 Aug 15 j 03:42 21°503'43 0°45'15 direct -3903 Jun 02 j 20:04 23°**Ω**56'57 minimum elong -3911 Aug 15 j 03:42 21°503'43 0°45'25 retrograde -3911 Nov 30 j 01:03 25°524'46 conjunction -3903 Sep 21 j 01:22 28° Ω18'46 0°47'36 -3910 Feb 12 j 00:43 23°523'20 0°51'16 -3903 Sep 21 j 01:22 28° **Ω**18'46 0°47'42 opposition minimum elong min. Earth dist. -3910 Feb 12 j 18:46 23°521'24 17.38802 AU max. Earth dist. -3903 Sep 21 j 00:23 28° **Q**18'36 19.73420 AU Planetary Phenomena of Uranus from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 34 Attention, astronomical year style is used: The year -3903 in astronomical counting style is the year 3904 BCE in historical counting style.

	-3903 Oct 18 j 19:28	0° m ⁄	
retrograde	-3902 Jan 06 j 03:53	2° Mp 34'48	
opposition	-3902 Mar 22 j 13:45	0° ™ 34'19	0°52'23
min. Earth dist.	-3902 Mar 22 j 14:11	0° Mp 34′16	17.76437 AU
	-3902 Apr 05 j 11:53	30° R Ω	
direct	-3902 Jun 07 j 20:21	28° Ω 31'16	
	-3902 Aug 06 j 13:40	0° m ∕	
conjunction	-3902 Sep 25 j 18:27	2° m 51'35	0°46'29
minimum elong	-3902 Sep 25 j 18:27	2° m 51'35	0°46'33
max. Earth dist.	-3902 Sep 25 j 18:33	2° Mp 51'36	19.79493 AU
retrograde	-3901 Jan 10 j 23:42	7° Mp 06'53	
opposition	-3901 Mar 27 j 13:30		0°50'58
min. Earth dist.	-3901 Mar 27 j 11:38	5° Mp 06′42	17.82590 AU
direct	-3901 Jun 12 j 18:34	3°Mp03'52	
conjunction	-3901 Sep 30 j 10:54		0°45'05
minimum elong	-3901 Sep 30 j 10:54	-	0°45'10
max. Earth dist.	-3901 Sep 30 j 14:04	-	19.85701 AU
retrograde	-3900 Jan 15 j 18:23	-	
opposition	-3900 Mar 31 j 12:48		0°49'14
min. Earth dist.	-3900 Mar 31 j 09:02		17.88833 AU
direct	-3900 Jun 16 j 18:07	7° m 34'41	
conjunction	-3900 Oct 04 j 02:13		0°43'25
minimum elong	-3900 Oct 04 j 02:13	-	0°43'29
max. Earth dist.	-3900 Oct 04 j 06:27	11° m 52'34	19.91983 AU

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style. -3900 Jan 15 j 18:23 11° Mp 37'11 minimum elong -3893 Nov 03 j 14:25 12°**2**21'01 0°25'45 retrograde -3900 Mar 31 j 12:48 9° m 36'56 0°49'14 max. Earth dist. -3893 Nov 04 j 09:57 12°**2**23'57 20.37610 AU opposition 9°m/37'19 17.88833 AU -3900 Mar 31 j 09:02 -3892 Feb 19 i 21:35 16° **2**29'17 min. Earth dist. retrograde -3900 Jun 16 j 18:07 direct 7° m 34'41 min. Earth dist. -3892 May 06 j 07:29 14° **△**31'32 18.40924 AU -3892 May 07 j 03:58 14°**£**29'27 0°26'49 opposition -3900 Oct 04 j 02:13 11° m 51'55 0°43'25 -3892 Jul 22 j 23:51 12°**♀**30'10 conjunction direct -3900 Oct 04 j 02:13 11° m 51'55 0°43'29 minimum elong -3900 Oct 04 j 06:27 11° m 52'34 19.91983 AU -3892 Nov 06 j 23:25 16°**£**35'00 0°22'38 max. Earth dist. conjunction -3892 Nov 06 j 23:25 16°**2**35'00 0°22'36 retrograde -3899 Jan 19 j 12:35 16° m 05'39 minimum elong opposition -3899 Apr 05 j 11:29 14° Mp 05'27 0°47'14 max. Earth dist. -3892 Nov 07 j 20:24 16°**2**38'08 20.44214 AU min. Earth dist. -3899 Apr 05 j 05:44 14° Mp 06'02 17.95152 AU retrograde -3891 Feb 23 j 09:48 20°**£**42'36 -3899 Jun 21 j 15:04 12° Mp 03'34 -3891 May 11 j 20:34 18°**Ω**42'53 direct opposition 0°23'15 min. Earth dist. -3891 May 10 j 23:25 18°**♀**45'01 18.47489 AU conjunction -3899 Oct 08 j 16:53 16° Mp 19'13 0°41'30 direct -3891 Jul 27 j 12:22 16°**△**44'00 minimum elong -3899 Oct 08 j 16:53 16° Mp 19'13 0°41'33 max. Earth dist. -3899 Oct 09 j 00:07 16° M 20'20 19.98330 AU conjunction -3891 Nov 11 j 08:06 20°**Ω**47'27 0°19'23 retrograde -3898 Jan 24 j 05:53 20° Mp 32'08 minimum elong -3891 Nov 11 j 08:06 20°**♀**47'27 0°19'20 opposition -3898 Apr 10 j 09:23 18° m 31'59 0°44'56 max. Earth dist. -3891 Nov 12 j 06:59 20°**♀**50'51 20.50714 AU min. Earth dist. -3898 Apr 10 j 01:22 18° m 32'48 18.01514 AU retrograde -3890 Feb 27 j 22:58 24° **2**54'24 direct -3898 Jun 26 j 13:36 16° m 30'28 opposition -3890 May 16 j 12:09 22°**2**54'47 min. Earth dist. -3890 May 15 j 12:41 22° **2**57'09 18.53900 AU -3890 Aug 01 j 02:55 20°**♀**56'17 conjunction -3898 Oct 13 j 06:24 20° m 44'30 0°39'21 direct minimum elong -3898 Oct 13 i 06:24 20° mp 44'30 0°39'23 max. Earth dist. -3898 Oct 13 j 14:54 20° m 45'48 20.04721 AU conjunction -3890 Nov 15 i 16:12 24°**£**58'25 0°16'02 retrograde -3897 Jan 28 j 22:24 24° m 56'36 minimum elong -3890 Nov 15 j 16:12 24°**£**58'25 0°15'58 -3897 Apr 15 j 06:30 22° m 56'28 0°42'25 -3890 Nov 15 j 14:52 24°**£**58'14 opposition behind sun begin -3897 Apr 14 j 20:49 22° m 57'27 18.07939 AU -3890 Nov 15 j 17:31 24°**£**58'37 min. Earth dist. behind sun end -3897 Jul 01 j 08:45 20° m 55'17 -3890 Nov 16 j 16:10 25° **2**01'59 20.57012 AU direct max. Earth dist. -3889 Mar 04 j 10:07 29°**೨**04'46 retrograde -3897 Oct 17 j 19:12 25° m 07'42 0°36'59 -3889 May 20 j 03:40 27°**♀**07'37 18.60087 AU conjunction min. Earth dist. -3897 Oct 17 j 19:13 25° m 07'42 0°36'59 -3889 May 21 j 03:14 27°**£**05'15 0°15'50 minimum elong opposition max. Earth dist. -3897 Oct 18 j 06:37 25° m 09'26 20.11172 AU -3889 Aug 05 j 13:54 25°**♀**07'07 direct -3896 Feb 02 j 13:40 29° m 18'59 retrograde -3896 Apr 19 j 02:41 27° m 18'52 0°39'39 -3889 Nov 19 j 23:53 29°**♀**07'59 opposition conjunction 0°12'38 -3896 Apr 18 j 14:23 27° Mp 20'08 18.14416 AU -3889 Nov 19 j 23:54 29°**♀**07'59 min. Earth dist. minimum elong 0°12'34 -3896 Jul 05 j 05:37 25° m 18'03 -3889 Nov 19 j 19:36 29°**£**07'22 direct behind sun begin -3889 Nov 20 j 04:11 29°**£**08'36 behind sun end conjunction -3896 Oct 21 j 07:04 29° m 28'52 0°34'25 max. Earth dist. -3889 Nov 21 j 01:11 29° **2**11'43 20.63057 AU -3896 Oct 21 j 07:04 29° m 28'52 0°34'26 -3889 Dec 04 j 17:33 0°M minimum elong max. Earth dist. -3896 Oct 21 j 19:59 29° m 30'49 20.17689 AU retrograde -3888 Mar 07 j 22:40 3°M13'44 -3896 Oct 29 j 20:08 0∘ಹ opposition -3888 May 24 j 17:27 1°M14'18 0°12'01 -3895 Feb 06 j 04:37 3°**₽**39'22 min. Earth dist. -3888 May 23 j 15:55 1°M16'52 18.65973 AU retrograde -3895 Apr 23 j 22:20 1°**2**39'16 0°36'42 -3888 Jun 27 j 01:39 30°R ₽ opposition min. Earth dist. -3895 Apr 23 j 08:27 1°**£**40'41 18.20984 AU -3888 Aug 09 j 03:03 29°**△**16'30 direct -3895 Jun 10 j 13:17 30°R Mp -3888 Sep 19 j 13:41 -3895 Jul 09 i 22:39 29° m 38'48 direct -3888 Nov 23 j 07:12 -3895 Aug 07 j 15:00 conjunction 3°M16'10 0°09'11 minimum elong -3888 Nov 23 i 07:12 3°M16'10 0°09'06 -3895 Oct 25 i 18:11 conjunction 3°**2**48'03 0°31'42 behind sun begin -3888 Nov 23 i 01:36 3°M15'22 minimum elong -3895 Oct 25 i 18:11 3°**△**48'03 0°31'41 behind sun end -3888 Nov 23 i 12:47 3°ML16'58 max. Earth dist. -3895 Oct 26 j 09:53 3°**£**50'26 20.24294 AU max. Earth dist. -3888 Nov 24 j 09:15 3°M20'00 20.68765 AU -3894 Feb 10 j 18:44 7°**£**57'47 retrograde -3887 Mar 12 j 09:01 7°M21'22 retrograde -3894 Apr 28 j 17:01 5°**£**57'46 0°33'34 5°M24'31 18.71510 AU opposition min. Earth dist. -3887 May 28 j 05:58 min. Earth dist. -3894 Apr 28 j 00:17 5°**2**59'28 18.27613 AU opposition -3887 May 29 j 07:12 5°M21'59 0°08'09 direct -3894 Jul 14 j 17:00 3°**£**57'41 direct -3887 Aug 13 j 13:07 3°M24'28 7°M22'59 0°05'43 conjunction -3894 Oct 30 j 04:36 8°**2**05'24 0°28'48 conjunction -3887 Nov 27 j 14:08 -3894 Oct 30 j 04:36 8°**♀**05'24 0°28'48 -3887 Nov 27 j 14:08 7°M22'59 0°05'37 minimum elong minimum elong -3894 Oct 30 j 21:47 8°**♀**07'59 20.30942 AU -3887 Nov 27 j 07:51 7° MJ22'05 max. Earth dist. behind sun begin -3893 Feb 15 j 08:04 12°**£**14'23 -3887 Nov 27 j 20:25 $7^{\circ}\text{ML}23^{\prime}53$ retrograde behind sun end opposition -3893 May 03 j 10:51 10°**£**14'27 0°30'16 max. Earth dist. -3887 Nov 28 j 17:01 7°M26'56 20.74108 AU min. Earth dist. -3893 May 02 j 17:02 10°**⊆**16'15 18.34283 AU retrograde -3886 Mar 16 j 20:38 11°M27'38 direct -3893 Jul 19 j 07:37 8°**£**14'45 opposition -3886 Jun 02 j 20:04 9°**M**₂8'17 0°04'16 min. Earth dist. -3886 Jun 01 j 17:10 9°M30'58 18.76645 AU conjunction -3893 Nov 03 j 14:25 12°**2**21'01 0°25'47 direct -3886 Aug 18 j 00:48 7°M31'00

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3886 in astronomical counting style is the year 3887 BCE in historical counting style. -3886 Dec 01 j 20:42 11° M28'27 0°02'12 conjunction -3880 Dec 25 i 05:32 5°**х** 36'48 0°-18'-6 conjunction minimum elong -3886 Dec 01 j 20:43 11°M28'27 -3880 Dec 25 j 05:31 5°**₹**36'48 0°18'15 minimum elong 0°02'06 -3886 Dec 01 j 14:10 11°ML27'31 -3880 Dec 26 j 11:54 5°**尽**41'10 21.01000 AU behind sun begin max. Earth dist. 9°**∡**³38'52 -3886 Dec 02 j 03:15 11°M29'23 -3879 Apr 14 j 11:30 behind sun end retrograde -3886 Dec 03 j 00:06 11°MJ32'27 20.79027 AU -3879 Jul 01 j 19:31 7°**х** 39'26 0°-21'-46 max. Earth dist. opposition -3885 Feb 12 j 16:48 15°ML -3879 Jun 30 j 15:15 min. Earth dist. 7°**х** 42′16 19.02349 AU -3885 Mar 21 j 05:48 15°M32'35 -3879 Sep 15 j 07:16 retrograde direct 5°**х** 43′16 -3885 Apr 27 j 20:27 15°RML -3885 Jun 06 j 05:54 13°**M**-35'51 18.81365 AU -3879 Dec 29 j 10:39 9°**х** 35'32 0°-21'-13 min. Earth dist. conjunction -3879 Dec 29 j 10:39 9°**∡**35'32 0°21'23 opposition -3885 Jun 07 j 08:11 13°ML33'13 0°00'24 minimum elong -3879 Dec 30 j 16:57 desc. node -3885 Jul 15 j 06:42 12°ML10'55 max. Earth dist. 9°**∡**39'53 21.03521 AU -3885 Aug 22 j 09:55 11°M36'09 -3878 Apr 18 j 21:42 13° ₹37'29 direct retrograde -3885 Nov 26 j 19:12 15°M -3878 Jul 04 j 22:33 11°**✗¹**40'59 19.04680 AU min. Earth dist. opposition -3878 Jul 06 j 03:33 11°**∡**′38′05 0°-25'-10 conjunction -3885 Dec 06 j 02:53 15°ML32'35 0°-1'-23 direct -3878 Sep 19 j 14:19 9°**х¹**42′02 minimum elong -3885 Dec 06 j 02:52 15°M32'34 0°01'30 behind sun begin -3885 Dec 05 j 20:19 15°M31'39 conjunction -3877 Jan 02 j 15:48 13°**尽** 33'58 0°-24'-14 behind sun end -3885 Dec 06 j 09:25 15°M33'30 minimum elong -3877 Jan 02 j 15:48 13°**尽** 33'58 0°24'25 max. Earth dist. -3885 Dec 07 j 06:51 15°MJ36'39 20.83553 AU max. Earth dist. -3877 Jan 03 j 22:07 13° ₹38'19 21.05643 AU retrograde -3884 Mar 24 j 16:25 19° ML 36'13 retrograde -3877 Apr 23 j 04:47 17° ₹35'50 opposition -3884 Jun 10 j 19:36 17°MJ36'50 0°-3'-26 min. Earth dist. -3877 Jul 09 j 07:37 15° ₹39'15 19.06600 AU min. Earth dist. -3884 Jun 09 i 15:46 17° M 39'37 18.85695 AU opposition -3877 Jul 10 j 11:16 15°**⋌** 36'29 0°-28'-26 direct -3884 Aug 25 j 19:51 15°M39'55 direct -3877 Sep 23 j 18:23 13° ₹ 40'33 conjunction -3884 Dec 09 i 08:32 19° ML35'25 0°-4'-52 conjunction -3876 Jan 06 j 21:09 17° ₹32'14 0°-27'-8 -3884 Dec 09 i 08:32 19°ML35'25 0°04'59 minimum elong -3876 Jan 06 i 21:09 17° ₹32'14 0°27'19 minimum elong -3884 Dec 09 i 02:09 19°MJ34'31 max. Earth dist. -3876 Jan 08 j 02:56 17° ₹36'30 21.07357 AU behind sun begin -3884 Dec 09 j 14:55 19°M36'19 retrograde -3876 Apr 26 j 14:26 21° ₹34'05 behind sun end -3884 Dec 10 j 13:11 19°ML39'35 20.87689 AU -3876 Jul 13 j 18:41 19° **₹** 34'46 0°-31'-34 max. Earth dist. opposition -3883 Mar 29 j 00:29 23°M38'38 min. Earth dist. -3876 Jul 12 j 14:45 19° ₹37'34 19.08082 AU retrograde -3876 Sep 27 j 01:06 17° ₹38'55 -3883 Jun 14 j 03:15 21°ML41'56 18.89665 AU min. Earth dist. direct -3883 Jun 15 j 06:30 21°M 39'12 0°-7'-15 opposition -3883 Aug 30 j 03:59 19°M 42'27 -3875 Jan 10 j 02:38 21° ₹ 30'27 0°-29'-55 direct conjunction -3875 Jan 10 j 02:38 21° ₹30'27 0°30'06 minimum elong -3883 Dec 13 j 14:05 23°M237'05 0°-8'-16 -3875 Jan 11 j 08:01 21° ₹ 34'39 21.08585 AU conjunction max. Earth dist. -3883 Dec 13 j 14:05 23°Ml37'05 0°08'25 -3875 Apr 30 j 21:56 25° ₹ 32'19 minimum elong retrograde -3883 Dec 13 j 08:19 23°M 36'16 -3875 Jul 16 j 23:46 23°**尽** 35'38 19.09056 AU behind sun begin min. Earth dist. behind sun end -3883 Dec 13 j 19:52 23°M237'54 opposition -3875 Jul 18 j 01:57 23° ₹ 33'01 0°-34'-33 max. Earth dist. -3883 Dec 14 j 19:16 23°ML41'19 20.91496 AU direct -3875 Oct 01 j 05:18 21° ₹37'13 retrograde -3882 Apr 02 j 10:52 27°M239'56 min. Earth dist. -3882 Jun 18 j 11:45 25°ML43'20 18.93312 AU conjunction -3874 Jan 14 j 08:34 25° **₹** 28'41 0°-32'-33 -3882 Jun 19 j 16:24 25°M 40'28 minimum elong -3874 Jan 14 j 08:34 25° **₹** 28'40 0°32'43 opposition direct -3882 Sep 03 j 12:11 23°M43'51 max. Earth dist. -3874 Jan 15 j 12:46 25° ₹32'42 21.09296 AU retrograde -3874 May 05 j 07:05 29° ₹30'36 -3882 Dec 17 j 19:23 27°M37'45 0°-11'-37 min. Earth dist. -3874 Jul 21 j 06:46 27° ₹33'53 19.09485 AU conjunction -3882 Dec 17 j 19:23 27° ML 37'45 0°11'45 -3874 Jul 22 j 08:42 27° ₹31'17 minimum elong opposition 0°-37'-23 -3874 Oct 05 j 11:14 25° ₹35'28 -3882 Dec 17 j 14:43 27° ML 37'06 behind sun begin direct -3882 Dec 18 i 00:04 27° ML38'25 behind sun end -3882 Dec 19 i 01:05 27° ML42'03 20.94973 AU -3873 Jan 18 j 14:43 29° ₹26'57 0°-35'-1 max. Earth dist. conjunction -3881 Jan 30 i 14:04 0°×7 minimum elong -3873 Jan 18 i 14:43 29° ₹26'57 0°35'12 -3873 Jan 19 j 17:59 29° ₹30'50 21.09428 AU -3881 Apr 06 j 18:04 1°**х** 40′16 max. Earth dist. retrograde -3881 Jun 16 j 01:18 30°RML -3873 Jan 28 j 07:15 0°궁 min. Earth dist. -3881 Jun 22 j 22:01 29°ML43'36 18.96641 AU retrograde -3873 May 09 j 14:34 3°**云**28'57 -3881 Jun 24 j 01:59 29°**M**.40'48 -3873 Jul 26 j 15:30 opposition 0°-14'-40 opposition 1°る29'35 0°-40'-1 -3881 Sep 07 j 18:53 27°ML44'20 direct min. Earth dist. -3873 Jul 25 j 15:31 1°る32'00 19.09327 AU -3873 Sep 06 j 23:05 30°R*x*⁷ -3881 Nov 22 j 23:58 0°×7 direct -3873 Oct 09 j 15:50 29° **₹** 33'43 -3881 Dec 22 j 00:27 1°**∡**¹37'35 0°-14'-54 -3873 Nov 10 j 16:19 0°궁 conjunction -3881 Dec 22 j 00:27 1°**∡**37'35 0°15'03 minimum elong -3881 Dec 21 j 21:59 1°**х** 37′15 -3872 Jan 22 j 20:57 3°る25'15 0°-37'-19 behind sun begin conjunction -3881 Dec 22 j 02:55 1°**∡**³37'56 -3872 Jan 22 j 20:57 3°**る**25'15 behind sun end minimum elong 0°37'29 max. Earth dist. -3881 Dec 23 j 06:27 1°**∡**′41'55 20.98150 AU max. Earth dist. -3872 Jan 23 j 22:47 3°る28'56 21.08993 AU retrograde -3880 Apr 10 j 04:32 5°**х** 39′52 retrograde -3872 May 12 j 23:12 7°る27'23 opposition min. Earth dist. -3880 Jun 26 j 05:43 3°**∡**43'19 18.99660 AU -3872 Jul 29 j 22:01 5°**る**27'56 0°-42'-28 opposition -3880 Jun 27 j 10:56 3°**҂**′40′24 0°-18'-16 min. Earth dist. -3872 Jul 28 j 22:25 5°る30'18 19.08604 AU -3880 Sep 11 j 02:11 1°**×**⁷44'04 -3872 Oct 12 j 21:24 3°**る**31'57

direct

direct

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3871 in astronomical counting style is the year 3872 BCE in historical counting style. 7°る23'38 0°-39'-26 -3871 Jan 26 i 03:37 conjunction -3863 Feb 27 i 23:56 9°**≈**26'02 0°-48'-57 conjunction minimum elong -3871 Jan 26 i 03:36 7°る23'38 0°39'37 -3863 Feb 27 j 23:56 9°≈26'02 0°49'06 minimum elong max. Earth dist. -3871 Jan 27 j 04:27 7°る27'10 21.07993 AU max. Earth dist. -3863 Feb 28 j 13:06 9°≈27'54 20.85305 AU -3863 Jun 19 j 07:35 13°**≈**31'26 -3871 May 17 j 06:30 11°る25'54 retrograde retrograde -3863 Sep 04 j 05:15 11°≈31'09 -3871 Aug 02 j 06:44 9°る28'31 19.07343 AU 0°-54'-17 min. Earth dist. opposition -3871 Aug 03 j 04:17 -3863 Sep 03 j 19:06 11°≈32'12 18.83166 AU opposition 9°**る**26'20 0°-44'-42 min. Earth dist. -3871 Oct 17 j 02:00 -3863 Nov 17 j 18:42 direct 7°**る**30'12 direct 9°≈33'23 -3870 Jan 30 j 10:35 11°る22'07 0°-41'-22 0°-49'-7 conjunction conjunction -3862 Mar 04 j 11:23 13°≈30'43 -3862 Mar 04 j 11:24 13°≈30'43 minimum elong -3870 Jan 30 j 10:34 11°る22'07 0°41'33 minimum elong 0°49'15 max. Earth dist. -3870 Jan 31 j 09:51 11°중25'26 21.06498 AU max. Earth dist. -3862 Mar 04 j 21:46 13°≈32'12 20.80902 AU -3870 May 21 j 15:21 15°**♂**24'35 -3862 Mar 31 j 00:25 15°≈ retrograde -3870 Aug 07 j 10:19 13°る24'53 0°-46'-44 -3862 Jun 23 j 19:43 17°≈36'46 opposition retrograde min. Earth dist. -3870 Aug 06 j 13:19 13°**♂**27'00 19.05610 AU opposition -3862 Sep 08 j 12:13 15°≈36'26 0°-54'-20 direct -3870 Oct 21 j 07:24 11°♂28'33 min. Earth dist. -3862 Sep 08 j 03:37 15°≈37'20 18.78564 AU -3862 Sep 23 j 09:34 15°R≈ conjunction -3869 Feb 03 j 17:47 15°る20'48 0°-43'-6 direct -3862 Nov 22 j 01:41 13°≈38'25 minimum elong -3869 Feb 03 j 17:47 15°**る**20'48 0°43'17 -3861 Jan 18 j 14:12 15°≈ max. Earth dist. -3869 Feb 04 j 16:07 15°る23'58 21.04535 AU retrograde -3869 May 25 j 22:26 19°る23'30 conjunction -3861 Mar 08 j 23:33 17°≈36'50 0°-49'-1 opposition -3869 Aug 11 j 16:18 17°る23'40 0°-48'-32 minimum elong -3861 Mar 08 j 23:33 17°≈36'50 0°49'09 min. Earth dist. -3869 Aug 10 j 21:14 17°る25'37 19.03441 AU max. Earth dist. -3861 Mar 09 j 08:16 17°≈38'05 20.76086 AU -3869 Oct 25 j 11:40 15°**る**27'09 direct retrograde -3861 Jun 28 j 06:32 21°≈43'33 opposition -3861 Sep 12 j 19:38 19°≈43'09 0°-54'-5 conjunction -3868 Feb 08 i 01:26 19°る19'49 0°-44'-38 min. Earth dist. -3861 Sep 12 j 13:27 19°≈43'48 18.73539 AU -3868 Feb 08 j 01:26 19°る19'49 0°44'49 direct -3861 Nov 26 j 08:00 17°≈44'51 minimum elong max. Earth dist. -3868 Feb 08 j 22:09 19°る22'46 21.02187 AU retrograde -3868 May 29 j 08:11 23°る22'49 -3860 Mar 12 j 12:33 21°≈44′25 0°-48'-40 conjunction -3868 Aug 14 j 22:10 21°る22'52 0°-50'-6 -3860 Mar 12 j 12:33 21°≈44′25 0°48'47 opposition minimum elong -3868 Aug 14 j 03:42 21°る24'45 19.00909 AU -3860 Mar 12 j 18:03 21°≈45'12 20.70868 AU min. Earth dist. max. Earth dist. -3868 Oct 28 j 16:59 19°る26'07 -3860 Jul 01 j 19:41 25°≈51'50 direct retrograde -3860 Sep 16 j 03:19 23°≈51'19 0°-53'-34 opposition -3867 Feb 11 j 09:32 23°る19'20 0°-45'-57 -3860 Sep 15 j 22:58 23°≈51'46 18.68112 AU conjunction min. Earth dist. -3867 Feb 11 j 09:32 23°る19'20 0°46'06 -3860 Nov 29 j 16:11 21°≈52'40 minimum elong direct -3867 Feb 12j05:17 23°る22'08 20.99469 AU max. Earth dist. -3867 Jun 02 j 15:41 27°る22'42 -3859 Mar 17 j 02:28 25°≈53'27 0°-48'-3 retrograde conjunction -3867 Aug 18 j 11:39 25°る24'20 18.98018 AU -3859 Mar 17 j 02:28 25°≈53'27 0°48'11 min. Earth dist. minimum elong opposition -3867 Aug 19 j 04:09 25°る22'38 0°-51'-26 max. Earth dist. -3859 Mar 17 j 06:09 25°≈53'59 20.65233 AU direct -3867 Nov 01 j 21:12 23°₹25'42 -3859 Jun 28 j 12:40 0°**)**€ retrograde -3859 Jul 06 j 07:32 0°**)**€01'32 conjunction -3866 Feb 15 j 18:15 27°る19'31 0°-47'-2 -3859 Jul 14 j 04:06 30°R≈ minimum elong -3866 Feb 15 j 18:15 27°る19'31 0°47'12 opposition -3859 Sep 20 j 11:30 28°≈00'54 0°-52'-46 max. Earth dist. -3866 Feb 16 j 12:04 27°る22'03 20.96423 AU min. Earth dist. -3859 Sep 20 j 09:34 28°≈01'06 18.62279 AU -3866 Apr 07 j 21:51 direct -3859 Dec 03 j 23:40 26°≈01'53 0°**≈** -3866 Jun 07 j 02:10 1°≈23'18 -3858 Mar 20 j 14:02 0°**∀** retrograde -3866 Aug 08 i 04:36 30°Rる -3866 Aug 23 i 10:01 29°**♂**23'10 0°-52'-32 -3858 Mar 21 i 16:59 0°**)** 03'54 0°-47'-11 opposition conjunction -3866 Aug 22 j 18:23 29°る24'46 18.94805 AU -3858 Mar 21 i 16:59 0°**)** 03'54 0°47'17 min. Earth dist. minimum elong 0°**)** 03'56 20.59237 AU direct -3866 Nov 06 j 02:44 27°る26'01 max. Earth dist. -3858 Mar 21 i 17:18 -3865 Jan 27 j 03:50 0°≈ retrograde -3858 Jul 10 i 21:22 4°¥12'41 opposition -3858 Sep 24 j 19:56 2°\dagger11'53 0°-51'-40 -3865 Feb 20 i 03:30 1°≈20'35 0°-47'-55 min. Earth dist. -3858 Sep 24 j 19:54 2°¥11'53 18.56122 AU conjunction -3865 Feb 20 j 03:30 1°≈20'35 0°48'04 direct -3858 Dec 08 j 09:05 0°**)** 12′28 minimum elong -3865 Feb 20 j 20:12 max. Earth dist. 1°≈22'58 20.93042 AU 5°≈24'51 retrograde -3865 Jun 11 j 10:37 conjunction -3857 Mar 26 j 08:19 4°\(\)\(15'46\) 0°-46'-3 opposition -3865 Aug 27 j 16:15 3°≈24'39 0°-53'-23 minimum elong -3857 Mar 26 j 08:19 4°\;\;\;\\ 15'46 0°46'09 min. Earth dist. -3865 Aug 27 j 02:39 3°**≈**26′03 18.91260 AU max. Earth dist. -3857 Mar 26 j 07:10 4°**升**15'36 20.52936 AU -3865 Nov 10 j 07:18 1°≈27'19 retrograde -3857 Jul 15 j 10:14 8°**¥**25′16 direct -3857 Sep 29 j 04:52 6°¥24'18 0°-50'-18 opposition -3864 Feb 24 j 13:14 5°≈22'41 0°-48'-33 min. Earth dist. -3857 Sep 29 j 06:57 6°**¥**24'05 18.49698 AU conjunction -3864 Feb 24 j 13:14 direct -3857 Dec 12 j 17:53 4°**)** 24′27 minimum elong 5°≈22'41 0°48'42 max. Earth dist. -3864 Feb 25 j 03:46 5°≈24'46 20.89350 AU retrograde -3864 Jun 14 j 21:51 9°≈27'31 conjunction -3856 Mar 30 j 00:11 8°**¥**29'05 0°-44'-40 opposition -3864 Aug 30 j 22:39 7°**≈**27'16 0°-53'-58 minimum elong -3856 Mar 30 j 00:11 8°**¥**29′05 0°44'45 min. Earth dist. -3864 Aug 30 j 10:10 7°**≈**28'33 18.87395 AU max. Earth dist. -3856 Mar 29 j 19:49 8°**∺**28'27 20.46424 AU direct -3864 Nov 13 j 13:25 5°≈29'43 retrograde -3856 Jul 19 j 00:39 12° **∺** 39'20

opposition

-3856 Oct 02 j 14:16 10° **X** 38'11 0°-48'-38

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3856 in astronomical counting style is the year 3857 BCE in historical counting style. min. Earth dist. -3856 Oct 02 j 18:14 10° + 37'45 18.43102 AU conjunction $-3847 \text{ May } 10 \text{ j } 12:56 \quad 17^{\circ} \Upsilon 47'01 \quad 0^{\circ} -21' -46$ -3856 Dec 16 j 04:12 8° ★ 37'53 minimum elong $-3847 \text{ May } 10 \text{ j } 12:56 \quad 17^{\circ} \Upsilon 47'01 \quad 0^{\circ} 21'44$ direct -3847 May 09 j 14:58 17°**Υ**43'43 19.87091 AU max. Earth dist. -3855 Apr 03 j 17:06 12° **★** 43'56 0°-43'-2 -3847 Aug 28 j 06:44 22°**Y**04′20 conjunction retrograde -3847 Nov 10 j 07:43 20°**Y**02'24 0°-22'-15 -3855 Apr 03 j 17:06 12° ¥43'56 0°43'06 minimum elong opposition -3855 Apr 03 j 11:32 12°**)** 43'07 20.39755 AU -3847 Nov 11 j 02:40 20°**Y**00'21 17.83947 AU max. Earth dist. min. Earth dist. -3855 Jul 23 j 14:45 16°**¥**54'54 -3846 Jan 24 j 11:53 17°**Y**58'43 retrograde direct -3855 Oct 07 j 00:05 14°**¥**53'35 opposition 0°-46'-42 -3846 May 15 j 13:03 22°**Υ**18'42 0°-18'-14 min. Earth dist. -3855 Oct 07 j 05:53 14° **€** 52'58 18.36381 AU conjunction -3846 May 15 j 13:03 22° **Y** 18'42 0° 18'12 direct -3855 Dec 20 j 14:56 12° ¥ 52'51 minimum elong max. Earth dist. -3846 May 14 j 12:12 22° Υ 14'57 19.80812 AU -3854 Apr 08 j 10:37 17° **米** 00'20 0°-41'-10 -3846 Sep 02 j 01:31 26°**Y**36'45 conjunction retrograde -3854 Apr 08 j 10:37 17° **米** 00'20 0°41'14 -3846 Nov 15 j 00:21 24°**Υ**34'44 minimum elong opposition 0°-18'-15 max. Earth dist. -3854 Apr 08 j 01:49 16°**米**59'03 20.33012 AU min. Earth dist. -3846 Nov 15 j 21:37 24°**Y**32'26 17.77732 AU retrograde -3854 Jul 28 j 05:31 21°**)** 12'05 direct -3845 Jan 29 j 06:07 22°**Y**30'40 opposition -3854 Oct 11 j 10:36 19°**米** 10'36 0°-44'-30 max. Earth dist. -3845 May 19 j 11:54 26°**Y**48'15 19.74660 AU min. Earth dist. -3854 Oct 11 j 18:13 19°**米**09'47 18.29629 AU direct -3854 Dec 25 j 02:00 17°**₭**09'26 conjunction -3845 May 20 j 13:43 26°**Y**52'10 0°-14'-34 minimum elong $-3845 \text{ May } 20 \text{ j } 13:43 \quad 26^{\circ} \Upsilon 52'10$ 0°14'31 conjunction -3853 Apr 13 j 04:53 21° **)** 18'24 0°-39'-3 behind sun begin -3845 May 20 j 11:01 26°Y51'46 minimum elong -3853 Apr 13 j 04:53 21°**)** € 18'24 0°39'05 behind sun end -3845 May 20 j 16:26 26° **Y** 52'34 max. Earth dist. -3853 Apr 12 j 19:14 21° H 16'59 20.26250 AU -3845 Jul 16 i 18:41 0°8 retrograde -3853 Aug 01 j 21:14 25°¥30'56 retrograde -3845 Sep 06 i 22:50 1°810'53 opposition -3853 Oct 15 j 21:43 23° **)** €29'19 0°-42'-3 -3845 Oct 30 j 11:28 30°R℃ min. Earth dist. -3853 Oct 16 j 06:47 23° ¥28'21 18.22878 AU opposition -3845 Nov 19 i 17:36 29° Υ 08'48 0°-14'-6 -3853 Dec 29 j 14:50 21° **\(27'46** min. Earth dist. -3845 Nov 20 i 15:25 29°**Υ**06'25 17.71652 AU direct -3844 Feb 03 j 02:56 27°**Υ**'04'22 direct -3852 Apr 16 j 23:58 25° **)** €38'15 0°-36'-42 -3844 Apr 30 j 07:58 0°X conjunction -3852 Apr 16 j 23:59 25° **★** 38'15 0°36'44 max. Earth dist. -3844 May 23 j 11:05 1°**8**23'01 19.68670 AU minimum elong -3852 Apr 16 j 11:09 25° ¥ 36'22 20.19531 AU max. Earth dist. -3852 Aug 05 j 12:25 29°**米**51'35 -3844 May 24 j 15:04 1°**8**27'17 0°-10'-48 retrograde conjunction -3852 Oct 19 j 09:25 27° X 49'52 0°-39'-20 -3844 May 24 j 15:05 0°10'45 opposition minimum elong 1°**8**27'17 -3852 Oct 19 j 20:24 27°**)** 48'41 18.16197 AU -3844 May 24 j 09:56 min. Earth dist. behind sun begin 1°**8**26'31 -3844 May 24 j 20:13 -3851 Jan 02 j 03:16 25° **★** 47'54 1°**8**28'03 direct behind sun end -3844 Sep 10 j 18:27 5°**8**46'38 retrograde -3851 Apr 21 j 20:11 29° **★**59'59 0°-34'-7 -3844 Nov 23 j 11:37 3°**8**44'28 0°-9'-51 conjunction opposition minimum elong -3851 Apr 21 j 20:11 29° **★** 59'59 0°34'09 min. Earth dist. -3844 Nov 24 j 11:40 3°**8**41'51 17.65785 AU max. Earth dist. -3851 Apr 21 j 06:31 29° ¥ 57'57 20.12884 AU direct -3843 Feb 06 j 22:41 1°**8**39'39 -3851 Apr 21 j 20:21 $0^{\circ}\Upsilon$ retrograde -3851 Aug 10 j 05:46 4°Υ14'07 conjunction -3843 May 29 j 16:57 6°803'58 0°-6'-57 opposition -3851 Oct 23 j 21:54 2°\bar{\gamma}12'20 0°-36'-22 minimum elong -3843 May 29 j 16:57 6°803'58 0°06'52 min. Earth dist. -3851 Oct 24 j 10:12 2°Υ11'00 18.09586 AU behind sun begin -3843 May 29 j 10:40 6°**8**03'02 direct -3850 Jan 06 j 17:58 0°Υ10'02 behind sun end -3843 May 29 j 23:14 6°**8**04'54 max. Earth dist. -3843 May 28 j 12:03 5°859'33 19.62935 AU -3850 Apr 26 j 16:57 4°Υ23'41 0°-31'-20 -3843 Sep 15 j 17:12 10°**8**23'53 conjunction retrograde -3843 Nov 28 i 06:21 minimum elong -3850 Apr 26 i 16:57 4°Υ23'41 0°31'20 opposition 8°**8**21'39 0°-5'-31 -3850 Apr 26 j 00:08 max. Earth dist. 4°**Υ**21'11 20.06320 AU min. Earth dist. -3843 Nov 29 i 06:29 8°819'01 17.60196 AU retrograde -3850 Aug 14 j 22:04 8°Y38'39 direct -3842 Feb 11 i 21:22 6°**8**16'29 opposition -3850 Oct 28 j 11:09 6°Y36'49 0°-33'-9 min. Earth dist. -3850 Oct 29 j 01:34 6°**Υ**35'16 18.03073 AU -3842 Jun 03 j 19:01 10°**8**42'04 0°-3'-2 conjunction direct -3849 Jan 11 j 08:20 4°Υ34'10 -3842 Jun 03 j 19:02 10°**8**42'05 0°02'57 minimum elong behind sun begin -3842 Jun 03 j 12:16 10°**8**41'04 -3842 Jun 04 j 01:48 10°**8**43'05 -3849 May 01 j 14:48 8°Υ'49'26 0°-28'-20 behind sun end conjunction minimum elong -3849 May 01 j 14:48 8°**Υ**49'26 0°28'21 max. Earth dist. -3842 Jun 02 j 13:03 10°\(237'28\) 19.57506 AU 8°**Ƴ**46'48 19.99845 AU max. Earth dist. -3849 Apr 30 j 21:09 -3842 Sep 11 j 01:14 15°**႘** -3842 Sep 20 j 13:31 15°**8**02'32 retrograde -3849 Aug 19 j 16:51 13°**Υ**05'12 retrograde -3849 Nov 02 j 01:08 11° **Y** 03'20 0° -29'-43 opposition -3842 Sep 30 j 03:33 15°R⊌ min. Earth dist. -3849 Nov 02 j 16:44 11°**Υ**01'39 17.96634 AU -3842 Dec 03 j 01:58 13°**8**00'13 0°-1'-7 opposition -3848 Jan 16 j 00:48 9°**Y**00′22 min. Earth dist. -3842 Dec 04 j 03:52 12°857'24 17.54968 AU direct -3841 Feb 16 j 17:57 10°**8**54'44 direct -3848 May 05 j 13:22 13° **Y**17'14 0° -25'-8 -3841 Mar 07 j 22:19 11°**8**04'29 conjunction asc. node -3841 Jun 03 j 01:48 15°**႘** minimum elong $-3848 \text{ May } 05 \text{ j } 13:22 \quad 13^{\circ} \Upsilon 17'14 \quad 0^{\circ} 25'07$ max. Earth dist. -3848 May 04 j 16:30 13°**Υ**14'07 19.93438 AU retrograde -3848 Aug 23 j 10:37 17°**Υ**33'48 conjunction -3841 Jun 08 j 21:29 15°**8**21'32 0°01'02 opposition -3848 Nov 05 j 16:04 15°**γ**'31'54 0°-26'-5 minimum elong -3841 Jun 08 j 21:30 15°**8**21'32 0°01'08 min. Earth dist. -3848 Nov 06 j 10:03 15°**Υ**29'57 17.90265 AU behind sun begin -3841 Jun 08 j 14:44 15°**8**20'31

behind sun end

-3841 Jun 09 j 04:16 15°**8**22'33

-3847 Jan 19 j 17:08 13°**Y**28'34

direct

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3841 in astronomical counting style is the year 3842 BCE in historical counting style. -3841 Jun 07 j 14:46 15°**8**16'48 19.52486 AU opposition -3833 Jan 09 i 15:34 20° **I** 50'08 0°32'29 max. Earth dist. -3841 Sep 25 j 13:25 19°842'29 min. Earth dist. -3833 Jan 10 j 17:09 20°**II**47'21 17.31775 AU retrograde opposition -3841 Dec 07 j 22:01 17°\(\delta 40'06 \) 0°03'17 -3833 Mar 27 j 05:08 18°**Д**43'41 direct -3841 Dec 08 j 23:31 17°\(\arrow\) 17.50173 AU min. Earth dist. -3840 Feb 21 j 17:59 15°**8**34'18 -3833 Jul 17 j 23:33 23°**Д**16'22 0°30'46 direct conjunction -3840 Jun 11 j 17:30 19°**8**57'29 -3833 Jul 17 j 23:33 23°**II**16'22 0°30'56 max. Earth dist. 19.47921 AU minimum elong -3833 Jul 16 j 18:11 23°**Д**11'44 19.31397 AU max. Earth dist. -3840 Jun 13 j 00:23 20°802'16 0°05'01 -3833 Nov 02 j 08:13 27°**II**39'09 conjunction retrograde -3840 Jun 13 j 00:23 20°**8**02'16 -3832 Jan 14 j 16:53 25°**Ⅲ**37'17 0°36'01 minimum elong 0°05'09 opposition -3832 Jan 15 j 17:53 25°**Ⅲ**34'35 17.31232 AU behind sun begin -3840 Jun 12 j 17:49 20°**8**01'16 min. Earth dist. behind sun end -3840 Jun 13 j 06:56 20°**8**03'15 direct -3832 Mar 31 j 09:04 23°**Ⅲ**30'50 -3840 Sep 29 j 10:33 24°**8**23'38 -3832 Jul 20 j 23:13 27°**Д**59'18 19.31084 AU retrograde max. Earth dist. -3840 Dec 11 j 19:07 22°**8**21'14 0°07'42 opposition min. Earth dist. -3840 Dec 12 j 21:55 22°8 18'18 17.45871 AU conjunction -3832 Jul 22 j 02:44 28°**Д**03'39 0°33'50 direct -3839 Feb 25 j 15:48 20°815'11 minimum elong -3832 Jul 22 j 02:44 28°**Ⅲ**03'39 0°33'59 max. Earth dist. -3839 Jun 16 j 19:46 24°**8**39'16 19.43888 AU -3832 Aug 22 j 18:58 0ಂತ retrograde -3832 Nov 06 j 08:59 2°526'18 conjunction -3839 Jun 18 j 03:21 24°**8**44'11 opposition -3831 Jan 18 j 18:50 0°ഇ24'32 0°39'19 0°521'55 17.31145 AU minimum elong -3839 Jun 18 j 03:20 24°**8**44'11 min. Earth dist. -3831 Jan 19 j 19:02 behind sun begin -3839 Jun 17 j 21:37 24°**8**43'19 -3831 Jan 28 j 06:42 30°R II behind sun end -3839 Jun 18 j 09:04 24°**8**45'03 direct -3831 Apr 05 j 13:24 28° **Ⅲ**18'08 retrograde -3839 Oct 04 i 10:53 29°805'56 -3831 Jun 08 i 13:47 0ಂತಾ opposition -3839 Dec 16 i 16:45 27°803'33 0°12'05 max. Earth dist. -3831 Jul 26 j 01:57 2°546'32 19.31236 AU min. Earth dist. -3839 Dec 17 i 18:43 27° **8**00'42 17.42120 AU direct -3838 Mar 02 j 17:21 24°**8**57'19 conjunction -3831 Jul 27 i 05:17 2°950'51 0°36'40 max. Earth dist. -3838 Jun 21 j 23:54 29°**8**22'27 19.40418 AU minimum elong -3831 Jul 27 j 05:17 2°950'51 0°36'49 -3831 Nov 11 j 08:56 7°9513'21 retrograde -3838 Jun 23 j 06:39 29°**8**27'15 0°12'51 -3830 Jan 23 j 21:04 5°**©**11'37 conjunction opposition 0°42'20 -3838 Jun 23 j 06:38 29°**8**27'14 0°12'59 -3830 Jan 24 j 20:38 5°509'05 17.31546 AU min. Earth dist. minimum elong -3838 Jun 23 j 02:38 29°**8**26'38 behind sun begin direct -3830 Apr 10 j 17:09 3°905'15 -3838 Jun 23 j 10:38 29°**8**27'51 max. Earth dist. -3830 Jul 31 j 06:13 behind sun end 7°533'45 19.31885 AU -3838 Jul 02 j 01:11 0°**Ⅱ** -3838 Oct 09 j 08:33 -3830 Aug 01 j 07:31 retrograde 3°**Ⅱ**49'20 conjunction 7°537'46 0°39'14 -3830 Aug 01 j 07:31 -3838 Dec 21 j 15:14 1°**II**47′00 0°16′25 opposition minimum elong 7°937'46 0°39'24 -3838 Dec 22 j 18:01 1°**Ⅱ**44'04 17.38948 AU -3830 Nov 16 j 09:45 11°959'58 min. Earth dist. retrograde -3837 Feb 08 j 10:43 30°R℃ -3829 Jan 28 j 23:21 opposition 9°958'18 0°45'03 -3837 Mar 07 j 16:41 29°**8**40'39 -3829 Jan 29 j 21:20 direct min. Earth dist. 9°955'56 17.32436 AU -3837 Apr 03 j 20:25 Π $^{\circ}0$ direct -3829 Apr 15 j 21:58 7°952'00 max. Earth dist. -3837 Jun 27 j 02:28 4°**П**06'29 19.37545 AU max. Earth dist. -3829 Aug 05 j 08:47 12°520'17 19.33034 AU conjunction -3837 Jun 28 j 09:50 4°**Ⅱ**11'24 0°16'41 conjunction -3829 Aug 06 j 09:06 12°\$24'08 0°41'31 -3837 Jun 28 j 09:50 4°**I**11'24 0°16'49 -3829 Aug 06 j 09:06 12°524'08 minimum elong minimum elong -3837 Oct 14 j 09:11 8°**Ⅲ**33'47 -3829 Nov 21 j 08:57 16°546'01 retrograde retrograde -3837 Dec 26 j 14:16 6°**Ⅲ**31'31 0°20'39 -3828 Feb 03 j 01:53 14°544'23 0°47'27 opposition opposition min. Earth dist. -3837 Dec 27 j 16:13 6°**Ⅲ**28'41 17.36360 AU min. Earth dist. -3828 Feb 03 j 23:11 14°542'05 17.33852 AU direct -3836 Mar 11 i 19:58 4°**Ⅱ**25'06 direct -3828 Apr 20 j 01:36 12°538'09 -3836 Jul 01 j 07:27 8°**Д**51'52 19.35229 AU max. Earth dist. max. Earth dist. -3828 Aug 09 j 11:49 17°506'15 19.34723 AU -3836 Jul 02 i 13:27 -3828 Aug 10 j 10:02 17°\$09'46 0°43'31 conjunction 8°II56'34 0°20'25 conjunction minimum elong -3836 Jul 02 i 13:27 8°II56'34 0°20'34 -3828 Aug 10 i 10:02 17°509'46 0°43'41 minimum elong retrograde -3836 Oct 18 j 07:32 13°**II**19'09 retrograde -3828 Nov 25 j 09:06 21°531'14 -3836 Dec 30 j 14:02 11°**II**17'00 0°24'45 opposition -3827 Feb 07 j 04:24 19°529'39 0°49'30 opposition min. Earth dist. -3836 Dec 31 j 16:30 11° **II** 14'07 17.34315 AU min. Earth dist. -3827 Feb 07 j 23:17 19°\$27'37 17.35806 AU direct -3835 Mar 16 j 21:37 9°**Ⅲ**10'33 direct -3827 Apr 25 j 06:45 17°523'34 -3835 Jul $\,$ 06 j $10{:}14\,$ $\,13^{\circ}\Pi37{'}46\,$ $\,19.33453\;\mathrm{AU}$ max. Earth dist. -3827 Aug 15 j 10:17 21°554'30 0°45'13 conjunction conjunction -3835 Jul 07 j 16:54 13°**Ц**42'35 0°24'02 minimum elong -3827 Aug 15 j 10:17 21°554'30 0°45'22 -3835 Jul 07 j 16:54 13°**耳**42'35 0°24'12 -3827 Aug 14 j 14:04 21°551'18 19.36966 AU minimum elong max. Earth dist. -3835 Oct 23 j 08:07 18°**Д**05'20 -3827 Nov 30 j 07:35 26°515'32 retrograde retrograde -3834 Jan 04 j 14:29 16°**Ⅲ**03'17 0°28'43 -3826 Feb 12 j 07:04 24°513'59 0°51'13 opposition opposition -3834 Jan 05 j 16:10 16°**Д**00'29 17.32803 AU -3826 Feb 13 j 00:57 24°512'05 17.38352 AU min. Earth dist. min. Earth dist. -3834 Mar 22 j 01:45 13°**II**56'49 direct direct -3826 Apr 30 j 09:50 22°508'05 conjunction -3834 Jul 12 j 20:19 18°**Ⅲ**29'16 0°27'30 conjunction -3826 Aug 20 j 09:38 26°538'14 0°46'36 minimum elong -3834 Jul 12 j 20:19 18°**Ⅲ**29'16 0°27'38 minimum elong -3826 Aug 20 j 09:38 26°538'14 0°46'44 -3834 Jul 11 j 15:25 18°**Ⅲ**24'43 19.32184 AU max. Earth dist. -3826 Aug 19 j 15:31 26°535'22 19.39814 AU max. Earth dist. retrograde -3834 Oct 28 j 07:52 22°**∏**52'04 -3826 Oct 19 j 20:03 $0^{\circ}\Omega$

•	nical year style is used: Tl		•				age o
retrograde	-3826 Dec 05 j 07:06	$0^{\circ} \Omega 58'46$	in astronomicai co	unting style is the year	-3818 Jul 15 j 16:0:		-
renograde	-3825 Jan 22 j 16:22	30°RS			-3010 Jul 13 J 10.0.	y U ily	
opposition	-3825 Feb 17 j 09:27	28°957'19	0.52125	conjunction	-3818 Sep 26 j 01:4'	7 3° m /44'12	0046!14
min. Earth dist.	-3825 Feb 17 j 09.27 -3825 Feb 18 j 00:17		17.41485 AU	minimum elong	-3818 Sep 26 j 01:4	-	
direct	-3825 May 05 j 14:47		17.41465 AU	max. Earth dist.	-3818 Sep 26 j 01:19		19.79474 AU
direct	-3825 Aug 03 j 16:28	20 3 31 39		retrograde	-3817 Jan 11 j 06:58	-	19.79474 AU
	-3623 Aug 03 j 10.26	0 06		opposition	-3817 Mar 27 j 20:04		0°50'41
conjunction	-3825 Aug 25 j 08:28	1° Ω 20'54	0°47'40	min. Earth dist.	-3817 Mar 27 j 18:29	-	17.82515 AU
minimum elong	-3825 Aug 25 j 08:27	1°Ω20'54		direct	-3817 Jun 13 j 01:4:		17.02313 AO
max. Earth dist.	-3825 Aug 24 j 17:02		19.43242 AU	direct	3017 Juli 13 J 01. 1.	, , , , , , , , , , , , , , , , , , ,	
retrograde	-3825 Dec 10 j 04:30	5°Ω40'54	17.43242 110	conjunction	-3817 Sep 30 j 18:13	8° m) 15'27	0°44'49
opposition	-3824 Feb 22 j 11:45	3° Ω 39'34	0°53'35	minimum elong	-3817 Sep 30 j 18:14		
min. Earth dist.	-3824 Feb 23 j 01:30		17.45204 AU	max. Earth dist.	-3817 Sep 30 j 20:52		19.85566 AU
direct	-3824 May 09 j 17:28	1° Ω 34'12	17.10201110	retrograde	-3816 Jan 16 j 01:10		19.00000110
	502 : 1/1My 0> j 17.20	1 003 . 12		opposition	-3816 Mar 31 j 19:13	-	0°48'56
conjunction	-3824 Aug 29 j 06:27	6° Ω 02'28	0°48'25	min. Earth dist.	-3816 Mar 31 j 16:04		17.88641 AU
minimum elong	-3824 Aug 29 j 06:27	6°Ω02'28		direct	-3816 Jun 17 j 00:10		17.00011110
max. Earth dist.	-3824 Aug 28 j 16:48		19.47251 AU	direct	5010 Juli 17 J 00:19) (inj 2 / 2 i	
retrograde	-3824 Dec 14 j 03:14	10° Ω 21'54	17.47231710	conjunction	-3816 Oct 04 j 09:30	5 12°m44'43	0°43'08
opposition	-3823 Feb 26 j 13:51	8°Ω20'43	0°54'14	minimum elong	-3816 Oct 04 j 09:30		0°43'11
min. Earth dist.	-3823 Feb 27 j 00:21		17.49467 AU	max. Earth dist.	-3816 Oct 04 j 03:30	•	
direct	-3823 May 14 j 21:31	6°Ω15'43	17.49407 AU	retrograde	-3815 Jan 19 j 19:3		19.91744 AU
direct	-3623 May 14 J 21.31	0 661343		opposition	-3815 Apr 05 j 17:5'		0°46'54
agniumation	2022 Cam 02:02:20	100 0 42152	0040151	min. Earth dist.	-3815 Apr 05 j 12:2'		
conjunction minimum elong	-3823 Sep 03 j 03:38				1 3		17.94607 AU
C	-3823 Sep 03 j 03:38			direct	-3815 Jun 21 j 22:13	5 12 III 30 14	
max. Earth dist.	-3823 Sep 02 j 17:11 -3823 Dec 11 j 03:36		19.51/65 AU	:	2015 0-4 00:00-0	170m 11155	0041112
	-			conjunction	-3815 Oct 09 j 00:00		0°41'12
retrograde	,	15° Ω 01'43		minimum elong	-3815 Oct 09 j 00:00		
•,•	,	15°R Ω	005.412.1	max. Earth dist.	-3815 Oct 09 j 07:02		19.98013 AU
opposition	-3822 Mar 03 j 15:55			retrograde	-3814 Jan 24 j 12:32	-	0044126
min. Earth dist.	-3822 Mar 04 j 01:15		17.54210 AU	opposition	-3814 Apr 10 j 15:50	-	
direct	-3822 May 19 j 23:21			min. Earth dist.	-3814 Apr 10 j 08:14	-	18.011/2 AU
	-3822 Sep 02 j 03:34	15.91		direct	-3814 Jun 26 j 20:0	1 1/° 110/22'58	
	2022 9 00:00-02	150 000104	0949157		-3814 Oct 13 j 13:39	210m 2701	0°39'02
conjunction	-3822 Sep 08 j 00:02			conjunction	,	•	
minimum elong	-3822 Sep 08 j 00:02			minimum elong	-3814 Oct 13 j 13:39		
max. Earth dist.	-3822 Sep 07 j 15:03		19.56/31 AU	max. Earth dist.	-3814 Oct 13 j 21:50		20.043/1 AU
retrograde	-3822 Dec 23 j 21:57		005406	retrograde	-3813 Jan 29 j 04:29		00.4210.4
opposition	-3821 Mar 08 j 17:21			opposition	-3813 Apr 15 j 12:40		0°42'04
min. Earth dist.	-3821 Mar 08 j 23:38		17.59363 AU	min. Earth dist.	-3813 Apr 15 j 03:1		18.07593 AU
direct	-3821 May 25 j 01:53	15°8635'12		direct	-3813 Jul 01 j 15:49	9 21 110/4/36	
conjunction	-3821 Sep 12 j 19:48	10°Ω50'55	0°48'44	conjunction	-3813 Oct 18 j 02:30	26° mg 00'03	0°36'40
minimum elong	-3821 Sep 12 j 19:48			minimum elong	-3813 Oct 18 j 02:30		0°36'42
max. Earth dist.	-3821 Sep 12 j 14:00			max. Earth dist.	-3813 Oct 18 j 13:5		20.10845 AU
	-3821 Sep 12 j 14:00 -3821 Dec 28 j 17:57		19.02032 AU	max. Earth dist.	-3812 Jan 13 j 00:42		20.10643 AU
retrograde	-3821 Dec 28 j 17.37 -3820 Mar 12 j 18:46		0954101	ratra ara da	,		
opposition	•			retrograde	-3812 Feb 02 j 20:32 -3812 Feb 23 j 22:52		
min. Earth dist. direct	-3820 Mar 12 j 23:52 -3820 May 29 j 02:03		11.0T033 AU	opposition	-3812 Feb 25 j 22.3.		0030118
direct	-3620 May 29 J 02.03	20 0612 30		* *	-3812 Apr 19 j 09:09	-	
conjunction	-3820 Sep 16 j 14:32	240 026110	0048113	min. Earth dist. direct	-3812 Apr 18 j 20:59	•	18.14117 AU
				direct	-		
minimum elong	-3820 Sep 16 j 14:32				-3812 Oct 15 j 19:4:	3 0∘ ⊽	
max. Earth dist.	-3820 Sep 16 j 09:54		19.07002 AU	. ,.	2012 0 + 21 : 14 1/	7 00 0 2 1105	0024107
retrograde	-3819 Jan 01 j 15:25		0052114	conjunction	-3812 Oct 21 j 14:1'		0°34'07
opposition	-3819 Mar 17 j 19:42			minimum elong	-3812 Oct 21 j 14:1'		
min. Earth dist.	-3819 Mar 17 j 21:57		17.70560 AU	max. Earth dist.	-3812 Oct 22 j 03:0:		20.17425 AU
direct	-3819 Jun 03 j 03:08	24 ~8(49'11		retrograde	-3811 Feb 06 j 10:50		002621
	2010.0	200 21	0047100	opposition	-3811 Apr 24 j 04:44		
conjunction	-3819 Sep 21 j 08:42	29° Ω 11'08	0°47'22	min. Earth dist.	-3811 Apr 23 j 14:5		18.20757 AU
minimum elong	-3819 Sep 21 j 08:42	29° Ω 11'08		direct	-3811 Jul 10 j 05:00	6 0° 2 30′56	
max. Earth dist.	-3819 Sep 21 j 07:17		19.73488 AU				
	-3819 Oct 04 j 11:30	0° m)		conjunction	-3811 Oct 26 j 01:3:		0°31'22
retrograde	-3818 Jan 06 j 10:41	3°m/27'12		minimum elong	-3811 Oct 26 j 01:3:		0°31'23
opposition	-3818 Mar 22 j 20:13	1° Mp 26'48		max. Earth dist.	-3811 Oct 26 j 17:20		20.24104 AU
min. Earth dist.	-3818 Mar 22 j 21:05		17.76469 AU	retrograde	-3810 Feb 11 j 02:00		
	-3818 Apr 30 j 10:07	30°R Ω		opposition	-3810 Apr 28 j 23:22		
direct	-3818 Jun 08 j 01:59	29° Ω 23'46		min. Earth dist.	-3810 Apr 28 j 06:5:	6°₽51'38	18.27458 AU

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3810 in astronomical counting style is the year 3811 BCE in historical counting style. direct -3810 Jul 14 j 23:12 4°**£**49'51 behind sun begin -3803 Nov 27 j 16:12 8°M16'28 -3803 Nov 28 j 04:52 8°ML18'17 behind sun end -3810 Oct 30 j 12:02 8°**♀**57'40 0°28'29 -3803 Nov 29 j 00:51 conjunction max. Earth dist. 8°M21'15 20.73339 AU -3810 Oct 30 j 12:02 -3802 Mar 17 j 04:14 12°M22'07 minimum elong 8°**£**57'40 0°28'28 retrograde -3810 Oct 31 j 05:03 9°**£**00'14 20.30817 AU min. Earth dist. -3802 Jun 02 j 01:02 10°M25'24 18.75796 AU max. Earth dist. -3809 Feb 15 j 15:16 13°**£**06'40 retrograde opposition -3802 Jun 03 j 03:24 10°M22'46 0°03'52 opposition -3809 May 03 j 17:27 11°**೨**06'46 0°29'54 direct -3802 Aug 18 j 08:57 8°M25'26 min. Earth dist. -3809 May 02 j 23:46 11°**♀**08'34 18.34175 AU -3809 Jul 19 j 14:05 -3802 Dec 02 j 05:03 12°ML23'03 0°01'50 direct 9°**₽**07'06 conjunction -3802 Dec 02 j 05:02 12°M23'03 minimum elong 0°01'45 conjunction -3809 Nov 03 j 21:54 13°**2**13'27 0°25'27 behind sun begin -3802 Dec 01 j 22:29 12°M22'07 -3809 Nov 03 j 21:54 13°**♀**13'27 -3802 Dec 02 j 11:35 12°M23'59 minimum elong 0°25'25 behind sun end -3802 Dec 03 j 07:49 12°M26'58 20.78119 AU max. Earth dist. -3809 Nov 04 j 17:25 13°**⊆**16'23 20.37511 AU max. Earth dist. retrograde -3808 Feb 20 j 05:23 17° **2**21'46 -3801 Jan 19 j 15:52 15°M₁ opposition -3808 May 07 j 10:41 15°**♀**22'00 0°26'26 retrograde -3801 Mar 21 j 13:10 16° ML 27'17 min. Earth dist. -3808 May 06 j 14:33 15°**£**24'02 18.40824 AU -3801 May 25 j 02:52 15°RM direct -3808 Jul 23 j 06:30 13°**Ω**22'45 opposition -3801 Jun 07 j 15:42 14° ML 27'54 0°00'01 min. Earth dist. -3801 Jun 06 j 13:47 14° ML30'29 18.80406 AU conjunction -3808 Nov 07 j 07:08 17°**2**27'42 0°22'17 desc. node -3801 Jun 08 j 14:56 14° ML 25'34 minimum elong -3808 Nov 07 j 07:08 17°**2**27'42 direct -3801 Aug 22 j 17:18 12° M 30'45 max. Earth dist. -3808 Nov 08 j 03:45 17° **2**30'47 20.44105 AU -3801 Nov 10 j 23:29 15°M retrograde -3807 Feb 23 i 17:47 21°**2**35'22 min. Earth dist. -3807 May 11 j 06:34 19° **2**37'49 18.47359 AU conjunction -3801 Dec 06 j 11:03 16°M27'21 0°-1'-44 -3807 May 12 j 03:24 19°**£**35'43 0°22'52 minimum elong -3801 Dec 06 j 11:03 16°M27'21 0°01'51 opposition direct -3807 Jul 27 j 19:43 17°**2**36'52 behind sun begin -3801 Dec 06 j 04:30 16°M26'25 -3801 Dec 06 j 17:36 16°M28'16 behind sun end -3807 Nov 11 j 15:57 21° **△**40'28 0°19'01 -3801 Dec 07 j 14:55 16°M31'25 20.82560 AU conjunction max. Earth dist. -3807 Nov 11 j 15:57 21°**2**40'28 0°18'58 -3800 Mar 24 j 23:53 20° M 31'06 minimum elong retrograde -3807 Nov 12 j 14:31 21°**2**43'50 20.50547 AU -3800 Jun 09 j 23:32 18°M 34'25 18.84685 AU max. Earth dist. min. Earth dist. -3806 Feb 28 j 06:58 25° **Ω**47'31 -3800 Jun 11 j 03:09 18°M 31'40 0°-3'-48 retrograde opposition -3806 May 16 j 19:12 23°**△**47'58 0°19'11 -3800 Aug 26 j 04:03 16°M34'41 opposition direct -3806 May 15 j 20:13 23°**♀**50'17 18.53685 AU min. Earth dist. -3800 Dec 09 j 16:47 20°M30'20 0°-5'-11 -3806 Aug 01 j 10:16 21°**-**249'31 conjunction direct -3800 Dec 09 j 16:48 20°M30'20 0°05'20 minimum elong -3806 Nov 16 j 00:13 25°**⊆**51'49 0°15'41 -3800 Dec 09 j 10:27 20°M29'27 conjunction behind sun begin -3806 Nov 16 j 00:13 25°**⊆**51'49 0°15'37 -3800 Dec 09 j 23:08 20°M31'14 minimum elong behind sun end -3806 Nov 15 j 22:18 25°**£**51'32 -3800 Dec 10 j 21:13 20°M34'28 20.86679 AU behind sun begin max. Earth dist. behind sun end -3806 Nov 16 j 02:08 25°**♀**52'06 retrograde -3799 Mar 29 j 08:14 24° M 33'40 max. Earth dist. -3806 Nov 16 j 23:29 25°**♀**55'16 20.56736 AU min. Earth dist. -3799 Jun 14 j 10:53 22°M 36'55 18.88671 AU retrograde -3805 Mar 04 j 18:14 29°**♀**58'15 opposition -3799 Jun 15 j 14:01 22°MJ34'12 0°-7'-36 -3805 May 20 j 11:15 28°**♀**01'07 18.59742 AU direct -3799 Aug 30 j 10:59 20°M37'22 min. Earth dist. -3805 May 21 j 10:19 27°**♀**58'48 0°15'25 opposition -3805 Aug 05 j 21:54 26° **2**00'41 -3799 Dec 13 j 22:20 24°MJ32'11 0°-8'-34 direct conjunction -3805 Nov 19 j 20:16 -3799 Dec 13 j 22:20 24°M32'11 minimum elong -3799 Dec 13 j 16:38 24°M31'23 behind sun begin -3805 Nov 20 j 08:10 0°ML01'45 0°12'16 -3799 Dec 14 i 04:03 24° ML32'59 conjunction behind sun end -3805 Nov 20 i 08:10 0°ML01'45 0°12'11 minimum elong max. Earth dist. -3799 Dec 15 i 03:36 24°M 36'26 20.90523 AU behind sun begin -3805 Nov 20 j 03:41 0°ML01'06 retrograde -3798 Apr 02 j 18:11 28°MJ35'08 behind sun end -3805 Nov 20 j 12:39 0°M02'24 min. Earth dist. -3798 Jun 18 j 19:26 26°M 38'31 18.92370 AU max. Earth dist. -3805 Nov 21 i 08:52 0°ML05'24 20.62635 AU -3798 Jun 20 j 00:06 26°M 35'38 0°-11'-20 opposition retrograde -3804 Mar 08 i 06:30 4°ML07'36 direct -3798 Sep 03 j 20:23 24°M38'59 min. Earth dist. -3804 May 23 i 23:46 2°ML10'43 18.65466 AU -3804 May 25 j 00:45 2°M08'13 0°11'36 -3798 Dec 18 j 03:36 28°M 33'03 0°-11'-54 opposition conjunction direct -3804 Aug 09 j 11:02 0°M10'25 minimum elong -3798 Dec 18 j 03:35 28°M 33'03 0°12'04 behind sun begin -3798 Dec 17 j 23:04 28° M 32'24 -3804 Nov 23 j 15:27 4°M10'16 0°08'49 behind sun end -3798 Dec 18 j 08:07 28° ML33'41 conjunction -3804 Nov 23 j 15:28 4°M10'16 0°08'45 max. Earth dist. -3798 Dec 19 j 09:13 28°M37'20 20.94064 AU minimum elong -3804 Nov 23 j 09:46 4° ነቤ 09' 27 -3797 Jan 12 j 17:41 0°**∡**¹ behind sun begin -3804 Nov 23 j 21:09 4°M11'05 -3797 Apr 07 j 02:27 2°**∡**³35'41 behind sun end retrograde -3797 Jun 23 j 05:45 0°**尽**39'00 18.95772 AU max. Earth dist. -3804 Nov 24 j 16:42 4°**ጤ**13'59 20.68171 AU min. Earth dist. 0°**-**736'11 0°-15'00 retrograde -3803 Mar 12 j 16:46 8°M15'34 opposition -3797 Jun 24 j 09:43 -3803 May 29 j 14:38 6°**M**⋅16'13 0°07'44 -3797 Jul 09 j 17:10 30°RM opposition min. Earth dist. -3803 May 28 j 13:54 6°**M**₊18'41 18.70823 AU direct -3797 Sep 08 j 02:24 28°M39'41 direct -3803 Aug 13 j 21:03 4°M18'40 -3797 Nov 04 j 08:03 0°**∡**¹

-3803 Nov 27 j 22:31

-3803 Nov 27 j 22:32

conjunction

minimum elong

8°**ጤ**17'23

8°**ጤ**17'23

0°05'21

0°05'15

conjunction

minimum elong

-3797 Dec 22 j 08:49

-3797 Dec 22 j 08:49

2°**∡**133'06 0°-15'-11

2°**∡**33'06 0°15'19

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3797 in astronomical counting style is the year 3798 BCE in historical counting style. -3797 Dec 22 i 06:39 2°**∡**32'48 -3788 Jan 23 i 05:47 behind sun begin conjunction 4° සි21'31 0°-37'-25 minimum elong behind sun end -3797 Dec 22 i 10:59 2°×33'25 -3788 Jan 23 j 05:47 4°**ප**21'31 0°37'36 max. Earth dist. -3797 Dec 23 j 14:57 2°**∡**37'27 20.97321 AU max. Earth dist. -3788 Jan 24 j 07:34 4°る25'11 21.07815 AU -3796 Apr 10 j 11:55 -3788 May 13 j 08:04 8°**ප**23'41 retrograde 6°**∡**135′29 retrograde -3788 Jul 29 j 07:06 -3796 Jun 27 j 18:47 4°**∡**³36′01 6°る26'29 19.07398 AU opposition 0°-18'-35 min. Earth dist. -3788 Jul 30 j 06:36 -3796 Jun 26 j 13:32 4°**∡**°38'57 min. Earth dist. 18.98867 AU opposition 6°る24'07 0°-42'-34 -3796 Sep 11 j 10:12 2°**х** 39′40 -3788 Oct 13 j 06:26 direct direct 4°る28'00 -3796 Dec 25 j 13:51 -3787 Jan 26 j 12:20 8°**ට**19'45 0°-39'-31 conjunction 6°**х** 32'32 0°-18'-22 conjunction -3796 Dec 25 j 13:51 -3787 Jan 26 j 12:20 minimum elong 6°**∡**³32'32 0°18'32 minimum elong 8°る19'45 0°39'41 -3787 Jan 27 j 13:04 max. Earth dist. -3796 Dec 26 j 20:08 6°**∡**36'53 21.00240 AU max. Earth dist. 8°る23'16 21.06777 AU -3795 Apr 14 j 19:55 -3787 May 17 j 14:50 12°**♂**22'05 retrograde 10°**₹**34'43 retrograde -3795 Jun 30 j 23:21 -3787 Aug 03 j 12:57 10°**♂**22'24 min. Earth dist. 8°**₰**38'06 19.01612 AU opposition 0°-44'-46 opposition -3795 Jul 02 j 03:33 8°**∡**³35′17 0°-22'-4 min. Earth dist. -3787 Aug 02 j 15:29 10°₹24'34 19.06130 AU direct -3795 Sep 15 j 15:50 6°**х¹**39'05 direct -3787 Oct 17 j 10:12 8°**る**26'09 conjunction -3795 Dec 29 j 19:08 10° **₹**'31'30 0°-21'-29 conjunction -3786 Jan 30 j 19:16 12°**⋜**18'09 0°-41'-25 minimum elong -3795 Dec 29 j 19:08 10°**√**31'30 0°21'38 minimum elong -3786 Jan 30 j 19:16 12°♂18'09 0°41'35 max. Earth dist. -3795 Dec 31 j 01:28 10° ₹35'51 21.02800 AU max. Earth dist. -3786 Jan 31 j 18:48 12°る21'30 21.05301 AU retrograde -3794 Apr 19 j 05:27 14° ₹33'32 retrograde -3786 May 22 j 00:11 16°る20'41 min. Earth dist. -3794 Jul 05 j 06:39 12° ₹37'02 19.03966 AU opposition -3786 Aug 07 j 18:53 14°**⋜**20'53 0°-46'-45 opposition -3794 Jul 06 j 11:34 12° ₹34'08 0°-25'-26 min. Earth dist. -3786 Aug 06 j 21:43 14°る23'02 19.04448 AU direct -3794 Sep 19 j 22:13 10° ₹38'04 direct -3786 Oct 21 j 16:11 12°る24'28 conjunction -3793 Jan 03 i 00:24 14° ₹30'08 0°-24'-28 conjunction -3785 Feb 04 i 02:28 16°る16'50 0°-43'-7 -3785 Feb 04 j 02:27 16° 16'50 0°43'17 minimum elong -3793 Jan 03 i 00:23 14° ₹ 30'08 0°24'38 minimum elong max. Earth dist. -3793 Jan 04 i 06:25 14° ₹34'26 21.04931 AU max. Earth dist. -3785 Feb 05 j 00:56 16°る20'01 21.03419 AU retrograde -3793 Apr 23 j 12:47 18° ₹32'05 retrograde -3785 May 26 j 07:32 20°る19'38 -3793 Jul 10 j 19:33 16° ₹32'43 0°-28'-41 min. Earth dist. -3785 Aug 11 j 05:44 18°る21'42 19.02386 AU opposition -3785 Aug 12 j 00:58 18°る19'44 0°-48'-32 min. Earth dist. -3793 Jul 09 j 16:05 16° ₹35'28 19.05875 AU opposition -3793 Sep 24 j 03:28 14° ₹36'46 -3785 Oct 25 j 20:07 16° ₹23'10 direct direct -3784 Feb 08 j 09:59 20°る15'57 0°-44'-37 -3792 Jan 07 j 05:46 18° **₹** 28'34 0°-27'-21 conjunction conjunction -3784 Feb 08 j 09:59 20°る15'57 0°44'46 -3792 Jan 07 j 05:45 18° **₹** 28'34 0°27'32 minimum elong minimum elong -3792 Jan 08 j 11:24 18° ₹ 32'48 21.06605 AU -3784 Feb 09 j 07:10 20° **る**18'58 21.01194 AU max. Earth dist. max. Earth dist. -3792 Apr 26 j 22:46 22°**尽** 30'30 -3784 May 29 j 16:54 24°**정**19'06 retrograde retrograde -3792 Jul 12 j 23:21 20° ₹33'55 19.07293 AU -3784 Aug 15 j 06:56 22°る19'07 0°-50'-4 min. Earth dist. opposition opposition -3792 Jul 14 j 03:07 20° **₹** 31'08 0°-31'-48 min. Earth dist. -3784 Aug 14 j 12:04 22°る21'02 18.99986 AU direct -3792 Sep 27 j 09:27 18°**尽**35'14 direct -3784 Oct 29 j 01:38 20°♂22'22 -3783 Feb 11 j 18:10 24°る15'42 0°-45'-54 conjunction -3791 Jan 10 j 11:27 22° ₹26'52 0°-30'-6 conjunction minimum elong -3791 Jan 10 j 11:27 22° ₹726'52 0°30'16 minimum elong -3783 Feb 11 j 18:10 24° ₹ 15'42 0°46'04 max. Earth dist. -3791 Jan 11 j 16:20 22° ₹31'00 21.07747 AU max. Earth dist. -3783 Feb 12 j 14:08 24°る18'32 20.98620 AU retrograde -3791 May 01 j 05:44 26° ₹28'49 retrograde -3783 Jun 03 j 01:08 28°**♂**19'14 min. Earth dist. -3791 Jul 17 j 08:32 24° ₹ 32'03 19.08164 AU -3783 Aug 19 j 12:54 26°정19'10 0°-51'-23 opposition -3791 Jul 18 i 10:24 24° ₹29'27 0°-34'-45 -3783 Aug 18 j 20:07 26°る20'53 18.97247 AU opposition min. Earth dist. -3791 Oct 01 j 13:58 22°**х** 33'35 -3783 Nov 02 j 05:53 24°る22'15 direct direct -3790 Jan 14 i 17:26 26° ₹ 25'07 0°-32'-43 -3782 Feb 16 i 02:53 28°る16'14 0°-46'-58 conjunction conjunction -3782 Feb 16 i 02:53 28°중16'14 0°47'07 minimum elong -3790 Jan 14 i 17:26 26° ₹25'07 0°32'53 minimum elong -3790 Jan 15 i 21:20 26° ₹29'06 21.08341 AU -3782 Feb 16 j 21:12 28°る18'50 20.95730 AU max. Earth dist. max. Earth dist. -3790 Apr 01 j 20:53 0°₹ -3782 Mar 19 j 10:08 0°**≈** -3790 May 05 j 15:48 0°る27'06 retrograde -3782 Jun 07 j 11:02 retrograde 2°≈20'12 -3790 Jun 08 j 21:01 30°R ✓ opposition -3782 Aug 23 j 19:00 0°≈20'05 0°-52'-27 -3790 Jul 22 j 17:22 28° ₹27'42 0°-37'-33 0°**≈**21'45 18.94188 AU opposition min. Earth dist. -3782 Aug 23 j 02:50 -3782 Sep 01 j 00:04 30°Rਰੋ min. Earth dist. -3790 Jul 21 j 15:36 28° ₹30'17 19.08463 AU -3782 Nov 06 j 11:30 28°₹22'59 direct -3790 Oct 05 j 20:07 26° ₹31'47 direct -3789 Jan 12 j 03:43 0°궁 -3781 Jan 08 j 17:28 0°≈ -3789 Jan 18 j 23:28 0°る23'19 0°-35'-9 -3781 Feb 20 j 12:03 conjunction conjunction 2°≈17'42 0°-47'-49 -3789 Jan 18 j 23:27 0°る23'19 0°35'19 -3781 Feb 20 j 12:03 minimum elong minimum elong 2°≈17'42 0°47'59 -3789 Jan 20 j 02:18 max. Earth dist. 0°る27'09 21.08344 AU max. Earth dist. -3781 Feb 21 j 05:03 2°**≈**20'08 20.92497 AU retrograde -3789 May 09 j 22:23 4°る25'23 retrograde -3781 Jun 11 j 19:58 6°≈22'10 min. Earth dist. -3789 Jul 26 j 00:26 2°る28'18 19.08188 AU min. Earth dist. -3781 Aug 27 j 11:26 4°≈23'27 18.90781 AU opposition -3789 Jul 27 j 00:11 2°**ට**25'54 0°-40'-9 opposition -3781 Aug 28 j 01:23 4°≈22'01 0°-53'-16 -3789 Oct 10 j 00:02 0°る29'55 -3781 Nov 10 j 16:07 2°≈24'45

direct

direct

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3780 in astronomical counting style is the year 3781 BCE in historical counting style. -3780 Feb 24 i 22:03 6°≈20'17 0°-48'-26 min. Earth dist. -3773 Sep 29 i 16:15 7°**升**21'55 18.49577 AU conjunction -3780 Feb 24 j 22:03 6°≈20'17 0°48'35 direct -3773 Dec 13 j 03:59 5°**)** 22′13 minimum elong -3780 Feb 25 j 13:02 6°≈22'25 20.88931 AU max. Earth dist. -3780 Jun 15 j 07:11 -3772 Mar 30 j 08:57 9°**)** 26'44 0°-44'-22 10°≈25'17 retrograde conjunction 8°≈25'05 0°-53'-49 -3772 Mar 30 j 08:57 9°\ 26'44 0°44'26 opposition -3780 Aug 31 j 07:47 minimum elong -3772 Mar 30 j 05:10 9°**升**26'11 20.46365 AU min. Earth dist. -3780 Aug 30 j 18:56 8°≈26'25 18.87027 AU max. Earth dist. -3772 Jul 19 j 08:57 13°**∺** 36'55 direct -3780 Nov 13 j 22:22 6°≈27'36 retrograde opposition -3772 Oct 02 j 23:41 11°**米**35'41 0°-48'-17 -3779 Feb 28 j 08:52 10°≈24'03 0°-48'-49 conjunction min. Earth dist. -3772 Oct 03 j 03:06 11° **★**35'19 18.43114 AU minimum elong -3779 Feb 28 j 08:53 10°≈24'03 0°48'57 direct -3772 Dec 16 j 14:30 9°**∺**35'21 max. Earth dist. -3779 Feb 28 j 22:10 10°≈25'57 20.84975 AU -3779 Jun 19 j 17:00 14°≈29'38 -3771 Apr 04 j 01:49 13° **X** 41'16 0°-42'-43 retrograde conjunction -3771 Apr 04 j 01:49 13° **★**41'16 0°42'47 opposition -3779 Sep 04 j 14:39 12°≈29'24 0°-54'-7 minimum elong min. Earth dist. -3779 Sep 04 j 04:22 12°≈30'27 18.82864 AU max. Earth dist. -3771 Apr 03 j 20:43 13°**)** 40'32 20.39840 AU direct -3779 Nov 18 j 03:45 10°≈31'41 retrograde -3771 Jul 23 j 22:48 17° **€** 52'12 opposition -3771 Oct 07 j 09:37 15°**米**50'50 0°-46'-20 conjunction -3778 Mar 04 j 20:24 14°≈29'06 0°-48'-57 min. Earth dist. -3771 Oct 07 j 14:59 15°**米**50'16 18.36550 AU minimum elong -3778 Mar 04 j 20:24 14°≈29'06 0°49'05 direct -3771 Dec 21 j 00:25 13°¥50'07 max. Earth dist. -3778 Mar 05 j 07:03 14°≈30'38 20.80610 AU -3778 Mar 13 j 20:21 15°≈ conjunction -3770 Apr 08 j 19:12 17° **€** 57'29 0°-40'-50 retrograde -3778 Jun 24 j 05:12 18°≈35'17 minimum elong -3770 Apr 08 j 19:12 17°**米** 57'29 0°40'52 opposition -3778 Sep 08 i 21:40 16°≈34'58 0°-54'-7 max. Earth dist. -3770 Apr 08 j 11:02 17° **)** 56'17 20.33261 AU min. Earth dist. -3778 Sep 08 i 12:51 16°≈35'53 18.78279 AU retrograde -3770 Jul 28 j 14:31 22°**)** € 09'13 -3778 Oct 23 i 06:46 15°R≈ opposition -3770 Oct 11 j 20:05 20° ★ 07'43 0°-44'-8 direct -3778 Nov 22 j 10:55 14°≈36'59 min. Earth dist. -3770 Oct 12 j 03:01 20° ¥ 06'59 18.29966 AU -3778 Dec 22 i 04:52 15°≈ -3770 Dec 25 j 12:20 18° ¥ 06'36 direct -3777 Mar 09 j 08:43 18°≈35'27 0°-48'-49 -3769 Apr 13 j 13:37 22° **∺** 15'29 0°-38'-42 conjunction conjunction -3777 Mar 09 j 08:43 18°≈35'27 -3769 Apr 13 j 13:37 22°**米** 15′29 0°48'56 minimum elong 0°38'45 minimum elong -3777 Mar 09 j 17:26 18°≈36'42 20.75800 AU -3769 Apr 13 j 04:28 22° H 14'08 20.26673 AU max. Earth dist. max. Earth dist. -3777 Jun 28 j 16:03 22°≈42'15 -3769 Aug 02 j 05:41 26°**∺**28'01 retrograde retrograde -3777 Sep 13 j 05:11 20°≈41'50 0°-53'-51 -3769 Oct 16 j 07:11 24° **★**26'26 0°-41'-39 opposition opposition -3769 Oct 16 j 15:48 24° **∺**25'31 18.23387 AU min. Earth dist. -3777 Sep 12 j 23:00 20°≈42'28 18.73249 AU min. Earth dist. -3769 Dec 29 j 23:22 22° **∺**24'58 -3777 Nov 26 j 17:31 18°≈43'31 direct direct -3776 Mar 12 j 21:39 22°≈43'04 0°-48'-26 -3768 Apr 17 j 08:45 26° ¥ 35'24 0°-36'-20 conjunction conjunction -3776 Mar 12 j 21:39 22°≈43'04 0°48'34 -3768 Apr 17 j 08:46 26° ★35'24 0°36'22 minimum elong minimum elong max. Earth dist. -3776 Mar 13 j 03:24 22°≈43'54 20.70573 AU max. Earth dist. -3768 Apr 16 j 20:27 26° ¥33'35 20.20121 AU retrograde -3776 Jul 02 j 04:50 26°≈50'31 -3768 Jun 23 j 01:37 $0^{\circ}\Upsilon$ opposition -3776 Sep 16 j 12:57 24°≈49'57 0°-53'-18 retrograde -3768 Aug 05 j 22:49 0°**Y**48'46 min. Earth dist. -3776 Sep 16 j 08:24 24°≈50'25 18.67811 AU -3768 Sep 19 j 07:47 30°R € -3776 Nov 30 j 01:45 22°≈51'16 -3768 Oct 19 j 19:00 28° ¥47'07 0°-38'-55 direct opposition min. Earth dist. -3768 Oct 20 j 05:24 28° **¥**46'01 18.16854 AU -3775 Mar 17 j 11:31 26°≈51'59 0°-47'-48 direct -3767 Jan 02 j 12:49 26° **∺**45'18 conjunction -3775 Mar 17 j 11:31 26°≈51'59 0°47'54 -3767 Apr 05 j 22:49 $0^{\circ}\Upsilon$ minimum elong -3775 Mar 17 j 15:21 26°≈52'32 20.64939 AU max. Earth dist. -3775 May 17 j 19:35 -3767 Apr 22 i 05:00 0°Υ′57'20 0°-33'-45 0°**)**€ conjunction -3775 Jul 06 i 16:32 retrograde 1°**)**(00'03 minimum elong -3767 Apr 22 i 05:00 0°**Υ**57'20 0°33'46 -3767 Apr 21 i 15:45 0°Υ55'23 20.13599 AU -3775 Aug 26 j 12:33 30°R≈ max. Earth dist. -3775 Sep 20 i 21:01 28°≈59'20 0°-52'-28 retrograde -3767 Aug 10 i 15:12 5°**Y**11'31 opposition min. Earth dist. -3775 Sep 20 j 19:02 28°≈59'32 18.61998 AU opposition -3767 Oct 24 j 07:29 3°Υ09'51 0°-35'-56 3°**Y**08'34 18.10346 AU direct -3775 Dec 04 j 09:41 27°≈00'16 min. Earth dist. -3767 Oct 24 j 19:30 -3774 Mar 03 j 23:42 0°**₩** direct -3766 Jan 07 j 02:07 1°**Y**07'42 5°**Υ**18'54 20.07114 AU max. Earth dist. -3766 Apr 26 j 09:24 conjunction -3774 Mar 22 j 01:57 1°\(\mathbf{1}\)02'11 0°-46'-55 minimum elong -3774 Mar 22 j 01:57 1°**)** 02'11 0°47'01 conjunction -3766 Apr 27 j 01:55 5°**Υ**21'21 0°-30'-57 max. Earth dist. -3774 Mar 22 j 02:44 1°**升**02'17 20.58984 AU minimum elong -3766 Apr 27 j 01:55 5°**Υ**21'21 0°30'58 -3774 Jul 11 j 05:56 5°**升**10′56 retrograde -3766 Aug 15 j 09:00 9°Y36'23 retrograde -3774 Sep 25 j 05:29 3°¥10'02 0°-51'-21 -3766 Oct 28 j 20:50 7°**Υ**34'40 0°-32'-43 opposition opposition -3774 Sep 25 j 05:05 3°**升**10′04 18.55903 AU -3766 Oct 29 j 10:55 7°**Υ**33'09 18.03882 AU min. Earth dist. min. Earth dist. -3774 Dec 08 j 18:59 -3765 Jan 11 j 17:01 5°**Y**32'11 direct 1°**米**10′32 direct conjunction -3773 Mar 26 j 17:01 5°**)** 13'44 0°-45'-46 conjunction -3765 May 01 j 23:45 9°**Υ**47'26 0°-27'-56 minimum elong -3773 Mar 26 j 17:01 5°**H**13'44 0°45'51 minimum elong -3765 May 01 j 23:46 9°**Y**47′26 0°27'55 max. Earth dist. -3773 Mar 26 j 16:18 5°**升**13'38 20.52762 AU max. Earth dist. -3765 May 01 j 06:17 9°**Υ**44'50 20.00650 AU -3773 Jul 15 j 18:31 9°\(\frac{1}{23}\) -3765 Aug 20 j 02:55 14°**Υ**03'16 retrograde retrograde -3773 Sep 29 j 14:26 7°**升**22'07 0°-49'-58 -3765 Nov 02 j 10:58 12°**Y**01'31 0°-29'-16 opposition opposition

•	ical year style is used: The			` //		, .	
min. Earth dist.	-3765 Nov 03 j 02:32	-		<i>C j</i>	-3758 Nov 08 j 11:48		
direct	-3764 Jan 16 j 09:18	9° Ƴ 58'41		opposition	-3758 Dec 03 j 11:07	13° 8 57'39	0°00'-42
				min. Earth dist.	-3758 Dec 04 j 12:40	13° 8 54'51	17.55608 AU
conjunction	-3764 May 05 j 22:27	14° Ƴ 15'31	0°-24'-43	asc. node	-3757 Feb 01 j 15:17	11° 8 58'31	
minimum elong	-3764 May 05 j 22:27			direct	-3757 Feb 17 j 03:27	11° 8 52'08	
max. Earth dist.	-3764 May 05 j 01:34	14° Ƴ 12'24	19.94196 AU		-3757 May 18 j 15:38		
retrograde	-3764 Aug 23 j 20:59	18° Ƴ 32'08		max. Earth dist.	-3757 Jun 07 j 23:43	16° 8 14'04	19.53174 AU
opposition	-	16° Ƴ 30′19					
min. Earth dist.	-3764 Nov 06 j 19:44		17.90985 AU	conjunction	-3757 Jun 09 j 05:51		0°01'24
direct	-3763 Jan 20 j 02:05	14° Y 27′06		minimum elong	-3757 Jun 09 j 05:51		0°01'31
		0 0		behind sun begin	-3757 Jun 08 j 23:04		
conjunction	-3763 May 10 j 22:02			behind sun end	-3757 Jun 09 j 12:37		
minimum elong	-3763 May 10 j 22:03		0°21'19	retrograde	-3757 Sep 25 j 21:22		0002111
max. Earth dist.	-3763 May 10 j 00:10		19.87773 AU	opposition	-3757 Dec 08 j 07:10		0°03'41
retrograde	-3763 Aug 28 j 16:23 -3763 Nov 10 j 17:35		00 211 47	min. Earth dist.	-3757 Dec 09 j 08:13		17.50915 AU
opposition min. Earth dist.	-3763 Nov 10 j 17:35			direct	-3756 Feb 22 j 02:57		10 49721 AII
direct	-3762 Jan 24 j 21:05		17.84387 AU	max. Earth dist.	-3756 Jun 12 j 02:08	20 034 18	19.48/21 AU
direct	-3702 Jan 24 J 21.03	10 3/21		conjunction	-3756 Jun 13 j 08:37	20° × 59'01	0°05'22
conjunction	-3762 May 15 j 21:57	23° ℃ 17'15	0°-17'-49	minimum elong	-3756 Jun 13 j 08:37		0°05'29
minimum elong	-3762 May 15 j 21:57			behind sun begin	-3756 Jun 13 j 02:06		0 03 27
max. Earth dist.	-3762 May 14 j 21:09			behind sun end	-3756 Jun 13 j 15:08		
retrograde	-3762 Sep 02 j 11:04		17.01110710	retrograde	-3756 Sep 29 j 19:03		
opposition	-3762 Nov 15 j 10:06		0°-17'-47	opposition	-3756 Dec 12 j 04:05		0°08'05
min. Earth dist.	-3762 Nov 16 j 07:18			min. Earth dist.	-3756 Dec 13 j 06:28		
direct	-3761 Jan 29 j 15:35			direct	-3755 Feb 26 j 01:14		
	J			max. Earth dist.	-3755 Jun 17 j 04:36		19.44813 AU
conjunction	-3761 May 20 j 22:41	27° Y 50'39	0°-14'-9		•		
minimum elong	-3761 May 20 j 22:42		0°14'07	conjunction	-3755 Jun 18 j 11:35	25° 8 40'33	0°09'17
behind sun begin	-3761 May 20 j 19:35	27° Ƴ 50'11		minimum elong	-3755 Jun 18 j 11:35	25° 8 40'33	0°09'25
behind sun end	-3761 May 21 j 01:48	27° Y 51'06		behind sun begin	-3755 Jun 18 j 05:58	25° 8 39'42	
max. Earth dist.	-3761 May 19 j 21:08	27° Y 46'46	19.75205 AU	behind sun end	-3755 Jun 18 j 17:12	25° 8 41'24	
	-3761 Jun 26 j 23:05	9° 8			-3755 Sep 26 j 00:01	Π °0	
retrograde	-3761 Sep 07 j 07:53	2° 8 09'18		retrograde	-3755 Oct 04 j 18:47	0° Ⅱ 02'10	
opposition	-3761 Nov 20 j 03:07	0° 8 07'13			-3755 Oct 13 j 12:35		
min. Earth dist.	-3761 Nov 21 j 00:58		17.72181 AU	opposition	-3755 Dec 17 j 01:40		
	-3761 Nov 22 j 21:30			min. Earth dist.	-3755 Dec 18 j 03:12		17.43096 AU
direct	-3760 Feb 03 j 12:28			direct	-3754 Mar 03 j 02:15		
	-3760 Apr 12 j 21:31	0°8		P 4 F	-3754 Jun 17 j 08:50	0°II	10 41 441 477
	27(0)(24:22.55	مولام داء د	00 101 22	max. Earth dist.	-3754 Jun 22 j 08:19	0°Щ18'35	19.41441 AU
conjunction	-3760 May 24 j 23:55	2° 8 25'35		. ,.	2754 1 22 14 42	00 Т22 110	0012100
minimum elong	-3760 May 24 j 23:55 -3760 May 24 j 18:37	2° 8 25'35 2° 8 24'48	0°10'19	conjunction	-3754 Jun 23 j 14:42	0° Ⅲ 23'19 0° Ⅲ 23'19	0°13'09
behind sun begin behind sun end	-3760 May 24 j 18.37	2° 8 26'22		minimum elong behind sun begin	-3754 Jun 23 j 14:42 -3754 Jun 23 j 10:53	0° I I23'19 0° I I22'44	0°13'17
max. Earth dist.	-3760 May 23 j 20:04		19.69195 AU	behind sun end	-3754 Jun 23 j 18:31	0° I I22'44 0° I I23'54	
retrograde	-3760 Sep 11 j 03:38	6° 8 44'50	17.07173 AU	retrograde	-3754 Oct 09 j 17:19	4° I I45'16	
opposition	-3760 Nov 23 j 21:06	4° 8 42'39	0°-9'-24	opposition	-3754 Dec 22 j 00:05	2° I I42'59	0°16'45
min. Earth dist.	-3760 Nov 24 j 20:59	_	17.66312 AU	min. Earth dist.	-3754 Dec 23 j 02:40		17.39997 AU
direct	-3759 Feb 07 j 08:15	2° 8 37'50	17.00312110	direct	-3753 Mar 08 j 01:54	0° I I36'42	17.57777110
max. Earth dist.	-3759 May 28 j 21:09		19.63473 AU	max. Earth dist.	-3753 Jun 27 j 10:57		19.38611 AU
					, <u>, , , , , , , , , , , , , , , , , </u>		
conjunction	-3759 May 30 j 01:34	7° 8 01'57	0°-6'-33	conjunction	-3753 Jun 28 j 18:02	5° Ⅱ 07'15	0°16'58
minimum elong	-3759 May 30 j 01:33	7° 8 01'57	0°06'29	minimum elong	-3753 Jun 28 j 18:02	5° Ⅱ 07'15	0°17'06
behind sun begin	-3759 May 29 j 19:12	7° 8 01'00		retrograde	-3753 Oct 14 j 17:25	9° Ⅱ 29'29	
behind sun end	-3759 May 30 j 07:55	7° 8 02'54		opposition	-3753 Dec 26 j 22:54	7° Ⅱ 27'17	0°20'57
retrograde	-3759 Sep 16 j 01:37	11° 8 21'45		min. Earth dist.	-3753 Dec 28 j 00:43	7° Ⅱ 24'28	17.37422 AU
opposition	-3759 Nov 28 j 15:39	9° 8 19'29		direct	-3752 Mar 12 j 04:14	5° Ⅱ 20′56	
min. Earth dist.	-3759 Nov 29 j 15:34	9° 8 16'52	17.60757 AU				
direct	-3758 Feb 12 j 06:26	7° 8 14'18		conjunction	-3752 Jul 02 j 21:42	9° Ⅱ 52'13	0°20'41
max. Earth dist.	-3758 Jun 02 j 21:53	11° 8 35'08	19.58101 AU	minimum elong	-3752 Jul 02 j 21:42	9° Ⅱ 52'13	0°20'50
				max. Earth dist.	-3752 Jul 01 j 15:39		19.36273 AU
conjunction	-3758 Jun 04 j 03:35			retrograde	-3752 Oct 18 j 16:47		
minimum elong	-3758 Jun 04 j 03:34		0°02'34	opposition	-3752 Dec 30 j 22:45		
behind sun begin	-3758 Jun 03 j 20:47			min. Earth dist.	-3751 Jan 01 j 01:18		17.35328 AU
behind sun end	-3758 Jun 04 j 10:20			direct	-3751 Mar 17 j 05:45		10.04445 :=
	-3758 Aug 04 j 13:32			max. Earth dist.	-3751 Jul 06 j 18:16	14°Щ33'12	19.34415 AU
retrograde	-3758 Sep 20 j 22:34	10, Q 00,00					

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3751 in astronomical counting style is the year 3752 BCE in historical counting style. -3751 Jul 08 j 01:03 14°**Д**38'02 0°24'16 minimum elong -3743 Aug 15 i 17:26 22°5647'43 0°45'18 conjunction minimum elong -3751 Jul 08 j 01:03 14°**Ⅲ**38'02 max. Earth dist. -3743 Aug 14 j 21:06 22°544'30 19.37081 AU 0°24'25 -3751 Oct 23 j 16:55 19°**耳**00'39 -3743 Nov 30 j 14:37 27°508'41 retrograde retrograde -3742 Feb 12 j 14:07 25°507'07 -3750 Jan 04 j 23:04 16°**Д**58'38 0°28'58 opposition 0°51'08 opposition -3750 Jan 06 j 00:47 16° Д55'50 17.33707 AU -3742 Feb 13 j 07:53 25°505'13 17.38484 AU min. Earth dist. min. Earth dist. -3750 Mar 22 j 09:46 14°**I**52'13 -3742 Apr 30 j 16:24 23°501'11 direct direct max. Earth dist. -3750 Jul 11 j 23:21 19°**Д**19'54 19.33015 AU conjunction -3742 Aug 20 j 16:52 27°531'18 0°46'31 -3750 Jul 13 j 04:35 19°**I**I24'29 0°27'42 conjunction minimum elong -3742 Aug 20 j 16:52 27°531'18 0°46'39 -3750 Jul 13 j 04:34 19°**Ⅲ**24'29 minimum elong 0°27'51 max. Earth dist. -3742 Aug 19 j 22:49 27°528'27 19.39966 AU -3750 Oct 28 j 16:25 23°**Ⅱ**47'09 retrograde -3742 Oct 01 j 05:56 $0^{\circ}\Omega$ -3749 Jan 09 j 23:55 21°**Ⅱ**45'14 0°32'42 -3742 Dec 05 j 14:40 opposition retrograde 1°**Ω**51'46 -3749 Jan 11 j 01:50 21°**Д**42'25 17.32534 AU -3741 Feb 13 j 21:33 30°Rூ min. Earth dist. direct -3749 Mar 27 j 12:58 19°**Ⅲ**38'48 opposition -3741 Feb 17 j 16:14 29°550'19 0°52'28 max. Earth dist. -3749 Jul 17 j 01:55 24°**I**I06'39 19.32073 AU min. Earth dist. -3741 Feb 18 j 07:08 29°548'44 17.41658 AU direct -3741 May 05 j 21:37 27°544'39 conjunction -3749 Jul 18 j 07:45 24°**Д**11'20 0°30'57 -3741 Jul 19 j 16:06 $0^{\circ}\Omega$ minimum elong -3749 Jul 18 j 07:45 24°**Ⅲ**11'20 retrograde -3749 Nov 02 j 16:32 28°**Ⅲ**34'00 conjunction -3741 Aug 25 j 15:40 2°Ω13'54 0°47'33 opposition -3748 Jan 15 j 01:12 26° **II** 32'08 0°36'12 minimum elong -3741 Aug 25 j 15:40 2°Ω13'54 0°47'41 min. Earth dist. -3748 Jan 16 j 02:20 26° **П**29'24 17.31824 AU max. Earth dist. -3741 Aug 25 j 00:01 2°**Ω**11'26 19.43435 AU direct -3748 Mar 31 i 17:32 24°**Ⅲ**25'41 retrograde -3741 Dec 10 j 11:31 6°**Ω**33'52 max. Earth dist. -3748 Jul 21 j 06:53 28°**Д**53'57 19.31590 AU opposition -3740 Feb 22 i 18:35 4°Ω32'34 0°53'27 min. Earth dist. -3740 Feb 23 i 08:24 4°Ω31'06 17.45406 AU conjunction -3748 Jul 22 j 10:47 28°Д58'21 0°33'58 direct -3740 May 09 j 23:36 2°Ω27'13 -3748 Jul 22 j 10:46 28° **II** 58'21 0°34'07 minimum elong -3748 Aug 07 j 20:13 -3740 Aug 29 j 13:35 6°Ω55'29 0°48'17 0ಂತಾ conjunction -3748 Nov 06 j 16:30 3°920'53 -3740 Aug 29 j 13:35 6°Ω55'29 0°48'25 retrograde minimum elong -3747 Jan 19 j 02:56 1°519'06 0°39'27 -3740 Aug 28 j 23:55 6°**Ω**53'20 19.47455 AU opposition max. Earth dist. -3740 Dec 14 j 10:55 11° Ω 14'54 -3747 Jan 20 j 03:29 min. Earth dist. 1°516'26 17.31572 AU retrograde -3747 Feb 21 j 00:46 30°RⅡ -3739 Feb 26 j 20:41 9°**Ω**13'45 0°54'04 opposition -3747 Apr 05 j 21:52 29°**Ⅱ**12'40 -3739 Feb 27 j 07:23 9°**Ω**12'37 17.49660 AU direct min. Earth dist. -3747 May 18 j 17:04 -3739 May 15 j 04:24 0ಂತಾ direct 7°**Ω**08'45 max. Earth dist. -3747 Jul 26 j 09:26 3°540'52 19.31591 AU -3739 Sep 03 j 10:57 11° Ω 35'57 0°48'41 conjunction -3739 Sep 03 j 10:57 11° Ω 35'57 0°48'48 -3747 Jul 27 j 13:16 3°5645'16 0°36'45 conjunction minimum elong -3739 Sep 03 j 00:10 11° **Ω**34'15 19.51940 AU -3747 Jul 27 j 13:16 max. Earth dist. minimum elong 3°545'15 0°36'55 retrograde -3747 Nov 11 j 16:25 8°907'38 -3739 Nov 04 j 07:55 15°**Ω** opposition -3746 Jan 24 j 04:55 6°505'52 0°42'25 retrograde -3739 Dec 19 j 07:05 $15^{\circ}\Omega$ 54'46 -3738 Feb 04 j 07:24 15°R Ω min. Earth dist. -3746 Jan 25 j 04:35 6°903'19 17.31836 AU direct -3746 Apr 11 j 01:29 3°959'27 opposition -3738 Mar 03 j 22:42 13°**Ω**53'47 0°54'19 min. Earth dist. -3738 Mar 04 j 08:24 13°**Ω**52'45 17.54359 AU -3746 Aug 01 j 15:13 8°931'51 0°39'17 direct -3738 May 20 j 05:34 11°**Ω**49'10 conjunction -3746 Aug 01 j 15:13 8°531'51 0°39'26 -3738 Aug 19 j 02:36 15°**Ω** minimum elong -3746 Jul 31 j 13:42 8°527'49 19.32117 AU max. Earth dist. -3746 Nov 16 j 17:02 12°\$53'57 $-3738 \text{ Sep } 08 \text{ j } 07:23 \quad 16^{\circ} \Omega 15'10 \quad 0^{\circ}48'46$ retrograde conjunction -3745 Jan 29 i 07:04 10°\$52'14 0°45'05 $-3738 \text{ Sep } 08 \text{ j } 07:23 \quad 16^{\circ} \Omega 15'10 \quad 0^{\circ} 48'53$ opposition minimum elong -3745 Jan 30 j 05:16 10°549'50 17.32616 AU -3738 Sep 07 j 22:08 16° Ω 13'43 19.56837 AU min. Earth dist. max. Earth dist. -3738 Dec 24 j 05:47 $20^{\circ}\Omega 33'22$ direct -3745 Apr 16 i 06:09 8°9545'52 retrograde opposition $-3737 \text{ Mar } 09 \text{ i } 00:18 \quad 18^{\circ} \Omega 32'32 \quad 0^{\circ} 54'13$ -3745 Aug 06 j 16:38 13°517'54 0°41'32 min. Earth dist. -3737 Mar 09 j 06:57 $18^{\circ}\Omega$ 31'50 17.59419 AU conjunction -3745 Aug 06 j 16:38 13°517'54 0°41'42 direct -3737 May 25 j 08:38 16°**Ω**28'17 minimum elong max. Earth dist. -3745 Aug 05 j 15:59 13°514'00 19.33177 AU retrograde -3745 Nov 21 j 16:03 17°539'40 conjunction -3737 Sep 13 j 03:14 20° Ω53'02 0°48'31 opposition -3744 Feb 03 j 09:16 15°\$37'59 0°47'26 minimum elong -3737 Sep 13 j 03:14 $20^{\circ}\Omega$ 53'02 $0^{\circ}48'37$ min. Earth dist. -3744 Feb 04 j 06:32 15°\$35'42 17.33970 AU max. Earth dist. -3737 Sep 12 j 20:59 20° **Ω**52'04 19.62047 AU -3744 Apr 20 j 08:44 13°531'42 direct retrograde -3737 Dec 29 j 01:20 $25^{\circ}\Omega$ 10'32 -3736 Mar 13 j 01:43 23° Ω 09'51 0°53'46 opposition -3744 Aug 10 j 17:27 18°503'14 0°43'30 -3736 Mar 13 j 07:21 23°**Ω**09'16 17.64767 AU conjunction min. Earth dist. -3744 Aug 10 j 17:27 18°903'14 direct -3736 May 29 j 09:15 $21^{\circ}\Omega$ 06'00 minimum elong 0°43'38 -3744 Aug 09 j 19:15 17°559'43 19.34829 AU max. Earth dist. retrograde -3744 Nov 25 j 16:53 22°524'37 conjunction -3736 Sep 16 j 22:09 $25^{\circ}\Omega$ 29'23 $0^{\circ}47'58$ opposition -3743 Feb 07 j 11:39 20°522'59 0°49'28 minimum elong $-3736 \text{ Sep } 16 \text{ j } 22:09 \quad 25^{\circ} \Omega 29'23$ 0°48'03 min. Earth dist. -3743 Feb 08 j 06:34 20°520'57 17.35913 AU max. Earth dist. -3736 Sep 16 j 17:07 25°Ω28'36 19.67529 AU direct -3743 Apr 25 j 14:00 18°516'51 retrograde -3735 Jan 01 j 22:51 29°**Ω**46'11 -3735 Mar 18 j 02:40 27° Ω 45'37 0°52'57 opposition -3743 Aug 15 j 17:27 22°547'43 0°45'10 min. Earth dist. -3735 Mar 18 j 05:20 27° **Ω**45'21 17.70359 AU conjunction

•	nical year style is used: The		_	` //		, .	age 12
direct	-3735 Jun 03 j 10:24		in astronomical co	min. Earth dist.	-3727 Apr 23 j 21:19		18.20612 AU
direct	-3735 Sep 20 j 13:57			direct	-3727 Apr 23 j 21:19 -3727 Jul 10 j 11:33	1° £ 23'41	18.20012 AU
	-3/33 Sep 20 j 13.37	V III		direct	-3/2/Jul 10 J 11.33	1 == 23 41	
conjunction	-3735 Sep 21 j 16:17	0° m 04'06	0°47'06	conjunction	-3727 Oct 26 j 09:13	5° £ 33'10	0°31'00
minimum elong	-3735 Sep 21 j 16:17	0° m) 04'06	0°47'11	minimum elong	-3727 Oct 26 j 09:13	5° £ 33'10	
max. Earth dist.	1 3	~	19.73216 AU	max. Earth dist.	-3727 Oct 20 j 09:13		20.24008 AU
	-3735 Sep 21 j 14:25		19.73210 AU				20.24008 AU
retrograde	-3734 Jan 06 j 17:39	4° Mp 20'09 2° Mp 19'41	0051140	retrograde	-3726 Feb 11 j 09:28	9° £ 42'57	0°32'48
opposition	-3734 Mar 23 j 03:13	~	0°51'49	opposition	-3726 Apr 29 j 06:10	7° £ 43'03	
min. Earth dist.	-3734 Mar 23 j 04:39	~	17.76128 AU	min. Earth dist.	-3726 Apr 28 j 13:49		18.27396 AU
direct	-3734 Jun 08 j 10:10	0° Mp 16'35		direct	-3726 Jul 15 j 05:35	5° ≙ 43'02	
conjunction	-3734 Sep 26 j 09:30	4° mp 37'03	0°45'57	conjunction	-3726 Oct 30 j 19:45	9° £ 51'01	0°28'06
minimum elong	-3734 Sep 26 j 09:30	4° m ₀ 37'03	0°46'00	minimum elong	-3726 Oct 30 j 19:45	9° £ 51'01	0°28'05
max. Earth dist.	-3734 Sep 26 j 08:36	-•	19.79071 AU	max. Earth dist.	-3726 Oct 30 j 19:43		20.30782 AU
retrograde	-3733 Jan 11 j 13:42	8° m ₂ 52'20	19.790/1 AU	retrograde	-3725 Feb 15 j 23:40	9 = 33 32 14° £ 00'06	20.30762 AU
opposition	-3733 Mar 28 j 02:53	6° Mp 51'57	0°50'21	min. Earth dist.	-3725 May 03 j 06:38		18.34152 AU
min. Earth dist.	-3733 Mar 28 j 01:38		17.82055 AU	opposition		12 ⊆ 02 00 12° ⊆ 00'19	0°29'29
	·	~	17.82033 AU		-3725 May 04 j 00:14		0 29 29
direct	-3733 Jun 13 j 09:14	4° m)49'11		direct	-3725 Jul 19 j 21:03	10° ≏ 00'44	
conjunction	-3733 Oct 01 j 01:58	9° m 08'08	0°44'31	conjunction	-3725 Nov 04 i 05:49	14° Ω 07'17	0°25'04
minimum elong	-3733 Oct 01 j 01:58	9° m)08'08	0°44'35	minimum elong	-3725 Nov 04 j 05:49		0°25'02
max. Earth dist.	-3733 Oct 01 j 04:18	9° m 08'29	19.85067 AU	max. Earth dist.	-3725 Nov 04 j 03:49		
	•	~	19.83007 AU		•		20.37493 AU
retrograde	-3732 Jan 16 j 07:20	13° Mp 22'36	0040125	retrograde	-3724 Feb 20 j 13:19		0926101
opposition	-3732 Apr 01 j 02:12	11°M)22'16	0°48'35	opposition	-3724 May 07 j 17:40		0°26'01
min. Earth dist.	-3732 Mar 31 j 23:23		17.88111 AU	min. Earth dist.	-3724 May 06 j 21:55		18.40/94 AU
direct	-3732 Jun 17 j 08:00	9° m 19'52		direct	-3724 Jul 23 j 13:25	14°2216'51	
conjunction	-3732 Oct 04 j 17:11	13° m 37'13	0°42'49	conjunction	-3724 Nov 07 j 15:06	100.0.21150	0°21'54
minimum elong	-3732 Oct 04 j 17:11	13° m)37'13	0°42'52	minimum elong	-3724 Nov 07 j 15:06		0°21'51
max. Earth dist.	-3732 Oct 04 j 17:11 -3732 Oct 04 j 20:43	-•	19.91201 AU	max. Earth dist.	-3724 Nov 07 j 13:00		
	-3731 Jan 20 j 02:11	17° m) 50'53	19.91201 AU		-3724 Nov 08 j 11:14 -3723 Feb 24 j 01:56		20.44032 AU
retrograde opposition	,	17 lly 30 33 15° Mp 50'35	0°46'32	retrograde opposition	-3723 Feb 24 j 01.36 -3723 May 12 j 10:33		0°22'26
min. Earth dist.	-3731 Apr 06 j 00:46 -3731 Apr 05 j 19:20		17.94322 AU	min. Earth dist.	-3723 May 12 j 10.33		
direct	-3731 Apr 03 j 19.20 -3731 Jun 22 j 05:22	13°m/48'32	17.94322 AU	direct	-3723 Jul 28 j 02:49		16.4/20/ AU
direct	-3/31 Juli 22 J 03.22	13 111/46 32		direct	-3/23 Jul 28 J 02.49	16 == 31 23	
conjunction	-3731 Oct 09 j 07:46	18° m)04'16	0°40'52	conjunction	-3723 Nov 12 j 00:09	22° Ω 35'09	0°18'38
minimum elong	-3731 Oct 09 j 07:46		0°40'54	minimum elong	-3723 Nov 12 j 00:09		0°18'35
max. Earth dist.	-3731 Oct 09 j 14:41			max. Earth dist.	-3723 Nov 12 j 22:20		
retrograde	-3730 Jan 24 j 18:37	-	17.77404 AU	retrograde	-3722 Feb 28 j 14:58		20.30403 AC
opposition	-3730 Apr 10 j 22:28	20° Mp 16'52	0°44'14	min. Earth dist.	-3722 May 16 j 04:03		18 53/83 ATT
min. Earth dist.	-3730 Apr 10 j 22:28		18.00679 AU	opposition	-3722 May 17 j 02:21		
direct	-3730 Jun 27 j 02:40	~	10.00077110	direct	-3722 Aug 01 j 17:43		0 10 43
direct	-5/50 Juli 2/ j 02.40	10 11/13 11		direct	-5/22 Aug 01 j 17.45	22 -77 21	
conjunction	-3730 Oct 13 j 21:16	22° m 29'19	0°38'42	conjunction	-3722 Nov 16 j 08:34	26° ≏ 46'49	0°15'17
minimum elong	-3730 Oct 13 j 21:16		0°38'44	minimum elong	-3722 Nov 16 j 08:34		0°15'13
max. Earth dist.	-3730 Oct 14 j 05:25	22° m/30'34		behind sun begin	-3722 Nov 16 j 06:09	26° £ 46'28	
retrograde	-3729 Jan 29 j 12:07	26° m) 41'22	20.03722710	behind sun end	-3722 Nov 16 j 10:59	26° ⊆ 47'10	
opposition	-3729 Apr 15 j 19:30	24° Mp 41'09	0°41'41	max. Earth dist.	-3722 Nov 17 j 07:11		20.56467 AU
min. Earth dist.	-3729 Apr 15 j 09:42		18.07201 AU		-3721 Jan 17 j 13:06	0°M	
direct	-3729 Jul 01 j 22:12		10.07201710	retrograde	-3721 Mar 05 j 02:14	0°ML53'18	
311000	5,25 Jul 01 J 22.12	00 C C ym		1011051440	-3721 Mar 03 j 02:14 -3721 Apr 22 j 16:26		
conjunction	-3729 Oct 18 j 10:02	26° m 52'24	0°36'19	opposition	-3721 Apr 22 j 10.20		0°14'59
minimum elong	-3729 Oct 18 j 10:02	26° M) 52'24	0°36'19	min. Earth dist.	-3721 May 20 j 19:15		
max. Earth dist.	-3729 Oct 18 j 21:30	-•	20.10512 AU	direct	-3721 May 20 j 15:15 -3721 Aug 06 j 05:29	26° ⊆ 55'45	16.57576 AC
max. Earm dist.	-	0° ⊽	20.10312 AU	direct	-3721 Aug 00 j 03:29 -3721 Nov 04 j 12:58	0°M	
retrograde	-3729 Dec 15 j 01:48 -3728 Feb 03 j 03:14	0° 22 1° 2 03'40			-5/21 NOV 04 J 12.38	U IIIG	
renograde				agniunation	2721 Nov. 20 ; 16:20	00 m 56156	0°11'52
onnosition	-3728 Mar 26 j 17:12	30°RM)	0020155	conjunction	-3721 Nov 20 j 16:30 -3721 Nov 20 j 16:30	0°M56'56	0°11'32 0°11'49
opposition	-3728 Apr 19 j 15:48	29° Mp 03'33	0°38'55	minimum elong	-	0°ጤ56'56 0°ጤ56'16	0 11 49
min. Earth dist.	-3728 Apr 19 j 03:41		18.13849 AU	behind sun begin	-3721 Nov 20 j 11:51		
direct	-3728 Jul 05 j 18:08	27° m/02'40		behind sun end	-3721 Nov 20 j 21:08	0°M57'36	20 (2200 41)
	-3728 Oct 01 j 11:19	0∘ ⊽		max. Earth dist.	-3721 Nov 21 j 16:46		20.62209 AU
	2729.0 : 21 : 21 ==	10 2 12122	0022145	retrograde	-3720 Mar 08 j 14:29	5°M02'48	10 (4050 177
conjunction	-3728 Oct 21 j 21:57	1° £ 13'39	0°33'45	min. Earth dist.	-3720 May 24 j 07:59		18.64958 AU
minimum elong	-3728 Oct 21 j 21:57	1° £ 13'40	0°33'46	opposition	-3720 May 25 j 08:18	3°M03'25	0°11'10
max. Earth dist.	-3728 Oct 22 j 10:39		20.17221 AU	direct	-3720 Aug 09 j 18:55	1°M05'34	
retrograde	-3727 Feb 06 j 19:23	5° £ 24'11	0025157		2720 31 22 : 22	50 m 05130	0000107
opposition	-3727 Apr 24 j 11:23	3° £ 24'09	0°35'57	conjunction	-3720 Nov 23 j 23:55	5°M05'30	0°08'26

Planetary Pheno							age 13
	cal year style is used: Th	-					
minimum elong	-3720 Nov 23 j 23:55	5° ™ 05'30	0°08'21	max. Earth dist.	-3714 Dec 19 j 17:37		20.93416 AU
behind sun begin	-3720 Nov 23 j 18:08	5° ™ 04'41			-3714 Dec 27 j 16:48	0° ∡	
behind sun end	-3720 Nov 24 j 05:42	5° ™ 06′20		retrograde	-3713 Apr 07 j 09:58	3° ∡ ³30'51	
max. Earth dist.	-3720 Nov 25 j 00:32	5° ™ 09'08	20.67589 AU	opposition	-3713 Jun 24 j 17:50	1° ∡ ³31′24	0°-15'-21
retrograde	-3719 Mar 13 j 00:37	9° ™ 10'48		min. Earth dist.	-3713 Jun 23 j 13:50	1° ∡ ³34'12	18.95145 AU
opposition	-3719 May 29 j 22:09	7° ™ 11'24	0°07'19		-3713 Aug 07 j 09:44	30°RM	
min. Earth dist.	-3719 May 28 j 21:57	7° ™ 13'49	18.70174 AU	direct	-3713 Sep 08 j 10:38	29°M34'55	
direct	-3719 Aug 14 j 05:30	5°M13′46			-3713 Oct 09 j 19:20	0° ∡ ¹	
conjunction	-3719 Nov 28 j 06:56	9° ™ 12'33	0°04'58	conjunction	-3713 Dec 22 j 17:25	3° ∡ ¹28'29	0°-15'-29
minimum elong	-3719 Nov 28 j 06:56	9° ™ 12'32	0°04'53	minimum elong	-3713 Dec 22 j 17:25	3° ≯ 28'29	0°15'38
behind sun begin	-3719 Nov 28 j 00:33	9° ™ 11'38		behind sun begin	-3713 Dec 22 j 15:42	3° ∡ ¹28'15	
behind sun end	-3719 Nov 28 j 13:19	9° ™ 13'27		behind sun end	-3713 Dec 22 j 19:08	3° ≯ 28'44	
max. Earth dist.	-3719 Nov 29 j 08:57		20.72633 AU	max. Earth dist.	-3713 Dec 23 j 23:38	3° ∡ ³32'51	20.96713 AU
retrograde	-3718 Mar 17 j 11:51	13°M17'16		retrograde	-3712 Apr 10 j 20:30	7° ∡ ³31′00	
min. Earth dist.	-3718 Jun 02 j 09:07		18.75044 AU	min. Earth dist.	-3712 Jun 26 j 21:51	5° ∡ ³34'31	18.98266 AU
opposition	-3718 Jun 03 j 11:04	11°ML17'50	0°03'27	opposition	-3712 Jun 28 j 03:03	5° ∡ 31'35	0°-18'-55
direct	-3718 Aug 18 j 17:11	9° ™ 20′25		direct	-3712 Sep 11 j 18:32	3° ∡ ³35'17	
conjunction	-3718 Dec 02 j 13:19		0°01'28	conjunction	-3712 Dec 25 j 22:40	7° ∡ ¹28'20	0°-18'-40
minimum elong	-3718 Dec 02 j 13:19		0°01'21	minimum elong	-3712 Dec 25 j 22:40	7° ∡ 128′20	0°18'49
behind sun begin	-3718 Dec 02 j 06:47			max. Earth dist.	-3712 Dec 27 j 04:44		20.99644 AU
behind sun end	-3718 Dec 02 j 19:52			retrograde	-3711 Apr 15 j 04:09	11° ∡ ³30'41	
max. Earth dist.	-3718 Dec 03 j 15:45		20.77337 AU	min. Earth dist.	-3711 Jul 01 j 07:52		19.01008 AU
	-3717 Jan 01 j 10:11			opposition	-3711 Jul 02 j 11:51	9° ∡ 31'19	0°-22'-23
retrograde	-3717 Mar 21 j 20:51	17°M22'18		direct	-3711 Sep 15 j 23:11	7° ∡ ³35′10	
desc. node	-3717 May 01 j 13:56						
opposition	-3717 Jun 07 j 23:23		0°00'-23	conjunction	-3711 Dec 30 j 04:06		0°-21'-46
min. Earth dist.	-3717 Jun 06 j 21:38	15° ™ 25'24	18.79612 AU	minimum elong	-3711 Dec 30 j 04:05	11° ∡ ¹27'48	0°21'55
	-3717 Jun 17 j 12:33	15°RM		max. Earth dist.	-3711 Dec 31 j 10:22	11° ∡ ³32′09	21.02178 AU
direct	-3717 Aug 23 j 02:26	13°M25'35		retrograde	-3710 Apr 19 j 14:16		
	-3717 Oct 24 j 09:31	15° ™		opposition		13° ∡ ³30'42	
				min. Earth dist.	-3710 Jul 05 j 15:30	13° ∡ 733'34	19.03314 AU
				mm. Eurin dist.	,		
conjunction	-3717 Dec 06 j 19:28		0°-2'-6	direct	-3710 Sep 20 j 06:46		
conjunction minimum elong	-3717 Dec 06 j 19:28 -3717 Dec 06 j 19:29		0°-2'-6 0°02'13		-3710 Sep 20 j 06:46	11° ₰ 34'41	
3	9	17°M22'15			-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23	11° х ³34'41 15° х ³26'58	0°-24'-45
minimum elong	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02	17°M22'15 17°M21'19 17°M23'10	0°02'13	direct	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23	11° х ³34'41 15° х ³26'58 15° х ³26'58	0°-24'-45 0°24'55
minimum elong behind sun begin	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57	17°M22'15 17°M21'19 17°M23'10	0°02'13	direct conjunction	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23	11° х ³34'41 15° х ³26'58 15° х ³26'58	0°-24'-45 0°24'55
minimum elong behind sun begin behind sun end	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25	17°M.22'15 17°M.21'19 17°M.23'10 17°M.26'18 21°M.26'00	0°02'13 20.81766 AU	conjunction minimum elong max. Earth dist. retrograde	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23	11° ₹34'41 15° ₹26'58 15° ₹26'58 15° ₹31'13	0°-24'-45 0°24'55
minimum elong behind sun begin behind sun end max. Earth dist.	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17	17°M.22'15 17°M.21'19 17°M.23'10 17°M.26'18 21°M.26'00	0°02'13 20.81766 AU	direct conjunction minimum elong max. Earth dist.	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15	11° 🗷 34'41 15° 🗷 26'58 15° 🗷 36'58 15° 🗷 31'13 19° 🗷 29'08 17° 🗷 32'32	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15	0°02'13 20.81766 AU	conjunction minimum elong max. Earth dist. retrograde	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14	11° 🗷 34'41 15° 🗷 26'58 15° 🗷 36'58 15° 🗷 31'13 19° 🗷 29'08 17° 🗷 32'32	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist.	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M26'30	0°02'13 20.81766 AU 18.83906 AU	conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15	11° ₹34'41 15° ₹26'58 15° ₹36'58 15° ₹31'13 19° ₹29'08 17° ₹32'32 17° ₹9'49	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Jun 11 j 10:53 -3716 Aug 26 j 12:28	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02	11° ₹34'41 15° ₹26'58 15° ₹36'58 15° ₹31'13 19° ₹29'08 17° ₹32'32 17° ₹29'49 15° ₹33'54	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Jun 11 j 10:53 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02	11° ₹34'41 15° ₹26'58 15° ₹36'58 15° ₹31'13 19° ₹29'08 17° ₹32'32 17° ₹29'49 15° ₹33'54 19° ₹25'55	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Jun 11 j 10:53 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M29'26 21°M25'11 21°M25'11	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04	11° ₹34'41 15° ₹26'58 15° ₹36'58 15° ₹31'13 19° ₹29'08 17° ₹32'32 17° ₹32'49 15° ₹33'54 19° ₹25'55 19° ₹25'55	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 09 j 18:53	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M29'26 21°M25'11 21°M25'11 21°M24'17	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 30'07	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 09 j 18:53 -3716 Dec 10 j 07:29	17°M22'15 17°M21'19 17°M23'10 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 25'55 19° 🛣 25'55	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 09 j 18:53 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23	17°M22'15 17°M21'19 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04 21°M29'17	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42 -3708 Jul 13 j 08:38	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 25'55 19° 🖈 30'07 23° 🔭 28'02 21° 🖈 31'28	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 09 j 18:53 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49	17°M22'15 17°M21'19 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04 21°M29'17 25°M28'33	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42 -3708 Jul 13 j 08:38 -3708 Jul 14 j 11:58	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 25'55 19° 🖈 30'07 23° 🖈 28'02 21° 🖈 31'28 21° 🖈 28'44	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49 -3715 Jun 15 j 21:54	17°M22'15 17°M21'19 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04 21°M29'17 25°M28'33 23°M29'02	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU 0°-7'-58	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42 -3708 Jul 13 j 08:38	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 25'55 19° 🖈 30'07 23° 🖈 28'02 21° 🖈 31'28 21° 🖈 28'44	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49 -3715 Jun 15 j 21:54 -3715 Jun 14 j 18:44	17°M22'15 17°M21'19 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04 21°M29'17 25°M28'33 23°M29'02 23°M31'45	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU 0°-7'-58	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42 -3708 Jul 13 j 08:38 -3708 Jul 14 j 11:58 -3708 Sep 27 j 18:13	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 25'55 19° 🖈 30'07 23° 🖈 28'02 21° 🖈 31'28 21° 🛪 32'50	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU 0°-32'-3
minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 23:17 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49 -3715 Jun 15 j 21:54	17°M22'15 17°M21'19 17°M26'18 21°M26'00 19°M29'15 19°M26'30 17°M29'26 21°M25'11 21°M25'11 21°M24'17 21°M26'04 21°M29'17 25°M28'33 23°M29'02 23°M31'45	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU 0°-7'-58	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 08 j 20:25 -3708 Apr 27 j 07:42 -3708 Jul 13 j 08:38 -3708 Jul 14 j 11:58 -3708 Sep 27 j 18:13	11° 🖈 34'41 15° 🖈 26'58 15° 🖈 26'58 15° 🖈 31'13 19° 🖈 29'08 17° 🖈 32'32 17° 🖈 29'49 15° 🖈 33'54 19° 🖈 25'55 19° 🖈 30'07 23° 🖈 28'02 21° 🖈 31'28 21° 🛣 28'44 19° 🛣 32'50 23° 🛣 24'41	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU 0°-32'-3
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minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun end max. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 02:02 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Jun 11 j 10:53 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 09 j 18:53 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49 -3715 Jun 15 j 21:54 -3715 Jun 14 j 18:44 -3715 Aug 30 j 20:02 -3715 Dec 14 j 06:52 -3715 Dec 14 j 06:52 -3715 Dec 14 j 01:15 -3715 Dec 14 j 01:15 -3715 Dec 14 j 01:52 -3715 Dec 14 j 01:55 -3715 Dec 14 j 01:55 -3715 Dec 15 j 12:06 -3714 Apr 03 j 02:09 -3714 Jun 19 j 03:16 -3714 Jun 20 j 07:57 -3714 Sep 04 j 04:42	17°M.22'15 17°M.21'19 17°M.23'10 17°M.26'18 21°M.26'00 19°M.29'15 19°M.26'30 17°M.25'11 21°M.25'11 21°M.25'11 21°M.26'04 21°M.29'17 25°M.28'33 23°M.29'02 23°M.31'45 21°M.32'09 25°M.27'05 25°M.27'05 25°M.27'05 25°M.27'05 25°M.27'05 25°M.31'19 29°M.30'36 25°M.31'54	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU 0°-7'-58 18.87937 AU 0°-8'-54 0°09'03 20.89816 AU 18.91690 AU 0°-11'-42 0°-12'-14	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong min. Earth dist. direct conjunction minimum elong	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jul 13 j 08:38 -3708 Jul 14 j 11:58 -3708 Sep 27 j 18:13 -3707 Jan 10 j 20:49 -3707 Jan 10 j 20:49 -3707 Jan 10 j 20:49 -3707 Jul 18 j 19:29 -3707 Jul 18 j 19:29 -3707 Jul 17 j 18:04 -3706 Jan 15 j 02:50 -3706 Jan 15 j 02:50 -3706 Jan 16 j 06:22 -3706 May 05 j 19:50 -3706 May 06 j 00:36	11° x 34'41 15° x 26'58 15° x 26'58 15° x 26'58 15° x 31'13 19° x 29'08 17° x 32'32 17° x 29'49 15° x 33'54 19° x 25'55 19° x 30'07 23° x 28'02 21° x 31'28 21° x 32'50 23° x 24'41 23° x 24'41 23° x 24'40 23° x 24'41 23° x 26'47 25° x 27'25 25° x 29'59 23° x 31'31 27° x 23'15 27° x 23'15 27° x 27'11 0° 5 1° 5 25'22	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-36 0°27'46 21.05796 AU 19.06415 AU 0°-32'-3 0°30'30 21.06793 AU 0°-34'-59 19.07130 AU 0°-32'-54 0°33'03
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minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun end max. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3717 Dec 06 j 19:29 -3717 Dec 06 j 12:57 -3717 Dec 07 j 02:02 -3717 Dec 07 j 02:02 -3716 Mar 25 j 07:25 -3716 Jun 10 j 07:20 -3716 Jun 11 j 10:53 -3716 Aug 26 j 12:28 -3716 Dec 10 j 01:12 -3716 Dec 10 j 01:11 -3716 Dec 09 j 18:53 -3716 Dec 10 j 07:29 -3716 Dec 11 j 05:23 -3715 Mar 29 j 15:49 -3715 Jun 15 j 21:54 -3715 Jun 14 j 18:44 -3715 Aug 30 j 20:02 -3715 Dec 14 j 06:52 -3715 Dec 14 j 06:52 -3715 Dec 14 j 01:15 -3715 Dec 14 j 01:15 -3715 Dec 14 j 01:52 -3715 Dec 14 j 01:55 -3715 Dec 14 j 01:55 -3715 Dec 15 j 12:06 -3714 Apr 03 j 02:09 -3714 Jun 19 j 03:16 -3714 Jun 20 j 07:57 -3714 Sep 04 j 04:42	17°M.22'15 17°M.21'19 17°M.23'10 17°M.26'18 21°M.26'00 19°M.29'15 19°M.26'30 17°M.29'26 21°M.25'11 21°M.25'11 21°M.26'17 25°M.28'33 23°M.29'02 23°M.31'45 21°M.27'05 25°M.27'05	0°02'13 20.81766 AU 18.83906 AU 0°-4'-12 0°-5'-32 0°05'40 20.85920 AU 0°-7'-58 18.87937 AU 0°-8'-54 0°09'03 20.89816 AU 18.91690 AU 0°-11'-42 0°-12'-14	conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct	-3710 Sep 20 j 06:46 -3709 Jan 03 j 09:23 -3709 Jan 04 j 15:03 -3709 Apr 23 j 22:14 -3709 Jul 10 j 01:15 -3709 Jul 11 j 04:18 -3709 Sep 24 j 11:02 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jan 07 j 15:04 -3708 Jul 13 j 08:38 -3708 Jul 14 j 11:58 -3708 Sep 27 j 18:13 -3707 Jan 10 j 20:49 -3707 Jan 10 j 20:49 -3707 Jan 10 j 20:49 -3707 Jul 18 j 19:29 -3707 Jul 18 j 19:29 -3707 Jul 17 j 18:04 -3706 Jan 15 j 02:50 -3706 Jan 15 j 02:50 -3706 Jan 16 j 06:22 -3706 May 05 j 19:50 -3706 May 06 j 00:36	11° x 34'41 15° x 26'58 15° x 26'58 15° x 31'13 19° x 29'08 17° x 32'32 17° x 29'49 15° x 33'54 19° x 25'55 19° x 25'55 19° x 30'07 23° x 28'02 21° x 31'28 21° x 32'44 123° x 24'40 23° x 32'50 23° x 31'31 27° x 32'59 23° x 31'31 27° x 27'11 0° \(\) 1° \(\) 25'22 30° R x \(\) 28'29' 29° x 28'29	0°-24'-45 0°24'55 21.04236 AU 19.05130 AU 0°-28'-58 0°-27'-46 21.05796 AU 19.06415 AU 0°-32'-3 0°-30'-20 0°30'30 21.06793 AU 0°-34'-59 19.07130 AU 0°-32'-54 0°33'03 21.07232 AU

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, page 14 Attention, astronomical year style is used: The year -3706 in astronomical counting style is the year 3707 BCE in historical counting style.

Attention, astronom		-	in astronomical co	unting style is the year	3707 BCE in historical	counting style	
direct	-3706 Oct 06 j 05:03			direct	-3698 Nov 06 j 21:00	29° පි 21'25	
	-3706 Dec 26 j 01:25	0°₹			-3698 Dec 15 j 16:52	0° ≈	
	2705 1 10:00 52	10-701120	00 251 10		2607.5.1. 20:21.20	20 1.(112	00 471 42
conjunction	-3705 Jan 19 j 08:52	1°る21'38 1°る21'38		conjunction	-3697 Feb 20 j 21:30	3°≈16'13	0°-47'-43
minimum elong	-3705 Jan 19 j 08:52			minimum elong	-3697 Feb 20 j 21:30	3°≈16'13	0°47'52
max. Earth dist.	-3705 Jan 20 j 11:15	5°る23'49	21.07120 AU	max. Earth dist.	-3697 Feb 21 j 14:36	3°≈18'39 7°≈20'48	20.91700 AU
retrograde min. Earth dist.	-3705 May 10 j 07:55 -3705 Jul 26 j 09:47		19.06925 AU	retrograde opposition	-3697 Jun 12 j 05:46 -3697 Aug 28 j 11:06	7 ≈2048 5°≈20'37	0° 53' 8
opposition	-3705 Jul 27 j 09:18	3°る20'38		min. Earth dist.	-3697 Aug 27 j 21:14		18.89999 AU
direct	-3705 Oct 10 j 09:54	1°る28'11	0 -40-18	direct	-3697 Nov 11 j 01:18	3°≈23'20	18.89999 AU
direct	-5705 Oct 10 j 07.54	1 02011		uncet	-307/1407/11/01.10	3 ~ 23 20	
conjunction	-3704 Jan 23 j 15:04	5° る 19'54	0°-37'-33	conjunction	-3696 Feb 25 j 07:35	7° ≈ 18'58	0°-48'-18
minimum elong	-3704 Jan 23 j 15:04	5° ರ 19'54		minimum elong	-3696 Feb 25 j 07:35	7° ≈ 18'58	0°48'27
max. Earth dist.	-3704 Jan 24 j 16:49	5° る 23'34	21.06531 AU	max. Earth dist.	-3696 Feb 25 j 22:44	7° ≈ 21'07	20.88145 AU
retrograde	-3704 May 13 j 16:50	9° ට 22'11		retrograde	-3696 Jun 15 j 17:27	11° ≈ 24′06	
opposition	-3704 Jul 30 j 15:47	7° る 22'30	0°-42'-41	opposition	-3696 Aug 31 j 17:44	9° ≈ 23'53	0°-53'-39
min. Earth dist.	-3704 Jul 29 j 16:15	7° る 24'52	19.06104 AU	min. Earth dist.	-3696 Aug 31 j 04:53	9° ≈ 25'12	18.86224 AU
direct	-3704 Oct 13 j 15:34	5° පි 26'17		direct	-3696 Nov 14 j 08:06	7° ≈ 26′22	
conjunction	-3703 Jan 26 j 21:36	9° ප 18'08		conjunction	-3695 Feb 28 j 18:32		0°-48'-39
minimum elong	-3703 Jan 26 j 21:36	9° ප 18'08		minimum elong	-3695 Feb 28 j 18:32		0°48'46
max. Earth dist.	-3703 Jan 27 j 22:13		21.05489 AU	max. Earth dist.	-3695 Mar 01 j 07:35		20.84141 AU
retrograde	-3703 May 17 j 23:43	13° る 20'33			-3695 May 16 j 20:27		
opposition	-3703 Aug 03 j 22:01	11°る20'46		retrograde	-3695 Jun 20 j 03:12		
min. Earth dist.	-3703 Aug 03 j 00:29		19.04864 AU	*4*	-3695 Jul 24 j 19:55		00 521 54
direct	-3703 Oct 17 j 20:00	9° る 24'24		opposition	-3695 Sep 05 j 00:36		
agniumation	2702 Ion 21:04:20	120=716120	09 411 29	min. Earth dist.	-3695 Sep 04 j 14:32		18.81994 AU
conjunction minimum elong	-3702 Jan 31 j 04:30 -3702 Jan 31 j 04:30			direct	-3695 Nov 18 j 13:34 -3694 Feb 25 j 01:40		
max. Earth dist.	-3702 Jan 31 j 04:30				-3094 FC0 23 J 01.40	15 🗪	
retrograde	-3702 May 22 j 09:09		21.04003 AU	conjunction	-3694 Mar 05 j 06:08	15°228'09	0°-48'-44
min. Earth dist.	-3702 Aug 07 j 06:38		19 03253 AU	minimum elong	-3694 Mar 05 j 06:08		0°48'51
opposition	-3702 Aug 08 j 04:06			max. Earth dist.	-3694 Mar 05 j 16:42		
direct	-3702 Oct 22 j 01:32			retrograde	-3694 Jun 24 j 15:10		
	,			opposition	-3694 Sep 09 j 07:47		0°-53'-53
conjunction	-3701 Feb 04 j 11:31	17° る 15'08	0°-43'-8	min. Earth dist.	-3694 Sep 08 j 22:57		18.77318 AU
minimum elong	-3701 Feb 04 j 11:31	17° る 15'08	0°43'17	direct	-3694 Nov 22 j 21:13		
max. Earth dist.	-3701 Feb 05 j 10:09	17° る 18'21	21.02269 AU				
retrograde	-3701 May 26 j 16:09	21° ප 18'02		conjunction	-3693 Mar 09 j 18:19	19° ≈ 34'36	0°-48'-35
opposition	-3701 Aug 12 j 10:18			minimum elong	-3693 Mar 09 j 18:20	19° ≈ 34'36	0°48'42
min. Earth dist.	-3701 Aug 11 j 14:48	19° る 20'02	19.01288 AU	max. Earth dist.	-3693 Mar 10 j 02:48	19° ≈ 35'49	20.74797 AU
direct	-3701 Oct 26 j 05:17	17° る 21'23		retrograde	-3693 Jun 29 j 01:43		
		_		opposition	-3693 Sep 13 j 15:23		
conjunction	-3700 Feb 08 j 19:13			min. Earth dist.	-3693 Sep 13 j 09:15		18.72207 AU
minimum elong	-3700 Feb 08 j 19:13			direct	-3693 Nov 27 j 03:49	19° ≈ 42'40	
max. Earth dist.	-3700 Feb 09 j 16:48		21.00147 AU		260234 12:07.22	220 - 42110	00 401 10
retrograde	-3700 May 30 j 02:29		09 501 2	conjunction	-3692 Mar 13 j 07:22		0°-48'-10 0°48'16
opposition	-3700 Aug 15 j 16:16			minimum elong	-3692 Mar 13 j 07:22 -3692 Mar 13 j 13:11		
min. Earth dist. direct	-3700 Aug 14 j 21:04 -3700 Oct 29 j 11:06		16.96994 AU	max. Earth dist. retrograde	-3692 Jul 02 j 14:27		20.69508 AU
direct	-3700 Oct 29 j 11.00	21 02033		opposition	-3692 Sep 16 j 23:01		0°-53'00
conjunction	-3699 Feb 12 j 03:24	25°云14'00	0°-45'-52	min. Earth dist.	-3692 Sep 16 j 18:16		
minimum elong	-3699 Feb 12 j 03:24			direct	-3692 Nov 30 j 12:29		10.00732710
max. Earth dist.	-3699 Feb 12 j 23:34			anout	30,21,01,30 j 12.2,	23 10 00 25	
retrograde	-3699 Jun 03 j 10:05		20.57075110	conjunction	-3691 Mar 17 j 21:11	27° ≈ 51'17	0°-47'-30
opposition	-3699 Aug 19 j 22:29		0°-51'-19	minimum elong	-3691 Mar 17 j 21:11		
min. Earth dist.	-3699 Aug 19 j 05:30			max. Earth dist.	-3691 Mar 18 j 01:04		
direct	-3699 Nov 02 j 14:45				-3691 Apr 25 j 20:28	0° \	
	v			retrograde	-3691 Jul 07 j 01:47	1° ¥ 59'30	
conjunction	-3698 Feb 16 j 12:08	29° ⋜ 14'36	0°-46'-54		-3691 Sep 20 j 18:44	30° R ≈	
minimum elong	-3698 Feb 16 j 12:08	29° ප 14'36	0°47'04	opposition	-3691 Sep 21 j 07:11	29° ≈ 58'42	0°-52'-8
max. Earth dist.	-3698 Feb 17 j 06:53	29° る 17'17	20.94876 AU	min. Earth dist.	-3691 Sep 21 j 05:01	29° ≈ 58'55	18.60944 AU
	-3698 Mar 01 j 20:04	0° ≈		direct	-3691 Dec 04 j 19:59		
retrograde	-3698 Jun 07 j 21:07	3° ≈ 18'41			-3690 Feb 13 j 22:24	0° ∀	
opposition	-3698 Aug 24 j 04:38	1°≈18'32		_			
min. Earth dist.	-3698 Aug 23 j 12:16		18.93366 AU	conjunction	-3690 Mar 22 j 11:28	2° H 01'34	
	-3698 Sep 28 j 03:54	30°RD		minimum elong	-3690 Mar 22 j 11:28	2° ∺ 01'34	U~46'41

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3690 in astronomical counting style is the year 3691 BCE in historical counting style. -3690 Mar 22 j 12:43 2°**)**€01'45 20.57964 AU max. Earth dist. -3682 Apr 26 i 19:31 6°Υ19'55 20.07296 AU max. Earth dist. -3690 Jul 11 j 15:26 6°¥10′28 -3682 Aug 15 j 19:09 10°**Υ**37'25 retrograde retrograde opposition -3690 Sep 25 j 15:37 4°**₩**09'29 0°-50'-59 -3682 Oct 29 j 07:35 8°**Υ**35'44 0°-32'-11 opposition -3690 Sep 25 j 14:44 -3682 Oct 29 j 21:30 8°**Ƴ**34'14 18.04056 AU min. Earth dist. 4°**₭**09'35 18.54933 AU min. Earth dist. -3690 Dec 09 j 05:28 -3681 Jan 12 j 03:47 6°**Y**33'16 direct 2°****09'57 direct 6°**)** 13'14 0°-45'-25 -3689 Mar 27 j 02:39 -3681 May 02 j 09:51 10°**Y**48'29 0°-27'-27 conjunction conjunction -3689 Mar 27 j 02:39 -3681 May 02 j 09:51 10°**Υ**48'29 minimum elong 6°**¥**13'14 0°45'30 minimum elong 0°27'27 -3689 Mar 27 j 02:21 -3681 May 01 j 16:25 10°**Υ**45'53 20.00801 AU max. Earth dist. 6° **★**13'12 20.51855 AU max. Earth dist. 10°**¥**22'50 retrograde -3689 Jul 16 j 04:08 retrograde -3681 Aug 20 j 13:32 15°**Υ**04'20 opposition -3689 Sep 30 j 00:31 8°**∺**21'42 0°-49'-34 opposition -3681 Nov 02 j 21:43 13°**Y**02'35 0°-28'-44 -3681 Nov 03 j 13:21 13°**Y**00'53 17.97544 AU min. Earth dist. -3689 Sep 30 j 01:58 8°**¥**21'33 18.48751 AU min. Earth dist. -3689 Dec 13 j 14:06 -3680 Jan 16 j 19:43 10°**Υ**59'45 direct 6°**)**€21'46 direct max. Earth dist. -3680 May 05 j 11:38 15°**Y**13'23 19.94285 AU conjunction -3688 Mar 30 j 18:32 10° **∺**26'23 0°-44'00 minimum elong -3688 Mar 30 j 18:32 10° **∺** 26'23 0°44'04 conjunction -3680 May 06 j 08:34 15°**Υ**16'31 0°-24'-14 max. Earth dist. -3688 Mar 30 j 15:28 10° **∺**25'56 20.45623 AU minimum elong -3680 May 06 j 08:34 15°**Υ**16'31 0°24'13 retrograde -3688 Jul 19 j 18:44 14° **∺** 36'43 retrograde -3680 Aug 24 j 07:38 19°**Y**33'07 opposition -3688 Oct 03 j 09:54 12°**)** €35'26 0°-47'-52 opposition -3680 Nov 06 j 12:42 17°**Υ**'31'16 0°-25'-4 min. Earth dist. -3688 Oct 03 j 12:41 12° \(\frac{1}{35}\)'09 18.42468 AU min. Earth dist. -3680 Nov 07 j 06:27 17°**Υ**29'21 17.91038 AU direct -3688 Dec 17 j 00:20 10° ¥ 35'06 direct -3679 Jan 20 j 13:01 15°**Υ**28'02 max. Earth dist. -3679 May 10 j 10:13 19°**Υ**'43'03 19.87790 AU conjunction -3687 Apr 04 j 11:21 14°\(\frac{1}{4}\)1'07 0°-42'-20 minimum elong -3687 Apr 04 i 11:21 14°\(\dagger41'07\) 0°42'23 conjunction -3679 May 11 j 08:03 19°**γ**'46'20 0°-20'-51 max. Earth dist. -3687 Apr 04 j 06:55 14° \(\frac{1}{2}\)40'28 20.39292 AU minimum elong $-3679 \text{ May } 11 \text{ i } 08:03 \quad 19^{\circ} \Upsilon 46'20$ 0°20'50 -3687 Jul 24 j 09:03 18° ¥ 52'11 -3679 Aug 29 j 02:56 24° Υ 03'38 retrograde retrograde opposition -3687 Oct 07 j 19:49 16° ¥ 50'48 0°-45'-55 -3679 Nov 11 j 04:22 22°**Υ**'01'42 0°-21'-14 opposition -3687 Oct 08 j 00:42 16° ¥ 50'17 18.36110 AU min. Earth dist. -3679 Nov 11 j 23:19 21°**Υ**'59'39 17.84575 AU min. Earth dist. -3687 Dec 21 j 10:31 14° **€** 50'06 -3678 Jan 25 j 07:11 19°**Y**58'04 direct direct max. Earth dist. -3678 May 15 j 07:12 24° Υ 14'07 19.81387 AU -3686 Apr 09 j 04:49 18° **升** 57'32 0°-40'-26 conjunction -3686 Apr 09 j 04:49 18°**升**57'32 0°40'29 -3678 May 16 j 08:02 24°**Υ**17'52 0°-17'-19 minimum elong conjunction -3686 Apr 08 j 21:28 18° ¥ 56'28 20.32930 AU -3678 May 16 j 08:02 24°**Υ**17'52 max. Earth dist. 0°17'17 minimum elong -3686 Jul 29 j 00:30 23°**₭**09'24 -3678 Sep 02 j 21:43 28°**Y**35'52 retrograde retrograde -3686 Oct 12 j 06:22 21° **★** 07'55 0°-43'-41 -3678 Nov 15 j 20:45 26° Υ 33'48 0° -17' -14opposition opposition -3686 Oct 12 j 12:38 21° **★**07'15 18.29741 AU -3678 Nov 16 j 17:42 26°**Υ**31'31 17.78260 AU min. Earth dist. min. Earth dist. -3686 Dec 25 j 21:40 19° **₭** 06'51 -3677 Jan 30 j 02:04 24°**Y**29'45 direct direct max. Earth dist. -3677 May 20 j 07:17 28°**Y**47'10 19.75162 AU conjunction -3685 Apr 13 j 23:11 23° **∺** 15'47 0°-38'-17 minimum elong -3685 Apr 13 j 23:12 23°**升** 15'47 0°38'19 conjunction -3677 May 21 j 08:40 28°**Y**51'01 0°-13'-40 max. Earth dist. -3685 Apr 13 j 14:43 23°**米**14'33 20.26549 AU -3677 May 21 j 08:40 28°**Y**51'01 0°13'37 minimum elong -3685 Aug 02 j 16:30 27°**₭**28'26 -3677 May 21 j 05:09 28°**Y**50'30 retrograde behind sun begin -3685 Oct 16 j 17:37 25° ¥26'54 0°-41'-11 behind sun end -3677 May 21 j 12:12 28°**Y**51'32 opposition min. Earth dist. -3685 Oct 17 j 01:51 25° **¥**26'01 18.23350 AU -3677 Jun 09 j 11:54 0°8 -3685 Dec 30 j 09:45 23°**∺**25'30 -3677 Sep 07 j 18:13 3°**8**09'39 direct retrograde opposition -3677 Nov 20 j 13:50 1°807'30 0°-13'-6 -3684 Apr 17 i 18:30 27°**)** €35'58 0°-35'-54 conjunction min. Earth dist. -3677 Nov 21 i 11:28 1°805'09 17.72141 AU minimum elong -3684 Apr 17 j 18:30 27° ¥ 35'58 0°35'56 -3677 Dec 17 j 22:11 30°R**Y** -3684 Apr 17 j 06:49 27° **)** 34'15 20.20163 AU -3676 Feb 03 j 22:25 29°**Y**03'04 max. Earth dist. direct -3684 May 30 j 20:14 $0^{\circ}\Upsilon$ -3676 Mar 22 j 01:58 0°8 -3676 May 24 j 06:08 -3684 Aug 06 j 08:40 1°**Y**49′26 max. Earth dist. 3°**8**21'31 19.69172 AU retrograde -3684 Oct 15 j 11:39 30°R € -3684 Oct 20 j 05:25 29° \(\frac{1}{2}\)47'51 0°-38'-26 conjunction -3676 May 25 j 09:49 3°**8**25'44 0°-9'-55 opposition -3684 Oct 20 j 15:26 29° X 46'46 18.16956 AU min. Earth dist. minimum elong -3676 May 25 i 09:49 3°**8**25'44 0°09'51 direct -3683 Jan 02 j 22:38 27° ¥46'05 behind sun begin -3676 May 25 j 04:21 3°**8**24'55 -3683 Mar 19 j 02:40 $0^{\circ}\Upsilon$ behind sun end -3676 May 25 j 15:18 3°**8**26'33 retrograde -3676 Sep 11 j 13:45 7°**8**44'59 -3683 Apr 22 j 14:53 1°Y 58'09 0°-33'-18 -3676 Nov 24 j 07:42 5°**8**42'44 0°-8'-53 conjunction opposition -3683 Apr 22 j 14:53 1°Y58'09 0°33'19 -3676 Nov 25 j 07:11 5°**8**40'10 17.66315 AU minimum elong min. Earth dist. 1°**Y**56'15 20.13747 AU -3683 Apr 22 j 02:01 -3675 Feb 07 j 18:43 3°**8**37'55 max. Earth dist. direct 6°**Y**12′25 -3675 May 29 j 07:31 7°**8**57'41 19.63514 AU retrograde -3683 Aug 11 j 02:05 max. Earth dist. -3683 Oct 24 j 18:07 4°Υ10'48 0°-35'-26 opposition min. Earth dist. -3683 Oct 25 j 06:04 4°**Υ**09'31 18.10521 AU conjunction -3675 May 30 j 11:29 8°**8**01'57 0°-6'-5 direct -3682 Jan 07 j 12:37 2°Y08'43 minimum elong -3675 May 30 j 11:29 8°**8**01'57 0°06'01 behind sun begin -3675 May 30 j 05:02 8°**8**01'00 -3682 Apr 27 j 11:46 6°\bar{Y}22'20 0°-30'-29 -3675 May 30 j 17:55 8°802'55 conjunction behind sun end -3682 Apr 27 j 11:46 6°Υ22'20 0°30'28 -3675 Sep 16 j 11:51 12°**8**21'46 minimum elong retrograde

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Earth dist. -3674 Jun 04 j 20:06 12°**8**40'38 -3667 Mar 17 j 15:51 11°**耳**08'01 behind sun end direct -3667 Jul 07 j 04:42 15°**I**35'00 19.34929 AU -3674 Jul 14 j 13:49 15°**8** max. Earth dist. retrograde -3674 Sep 21 j 08:15 16°859'58 -3674 Dec 02 j 23:57 15°R8 -3667 Jul 08 j 11:34 15° **∏**39'50 0°24'35 conjunction -3667 Jul 08 j 11:34 15°**Ⅲ**39'50 opposition -3674 Dec 03 j 21:46 14°\(\color 57'37 \) 0°00'-12 minimum elong 0°24'44 min. Earth dist. -3674 Dec 04 j 22:48 14°\(\delta 54'53 \) 17.55813 AU retrograde -3667 Oct 24 j 04:08 20° **I**I 02'27 asc. node -3674 Dec 22 j 17:36 14°809'32 opposition -3666 Jan 05 j 09:47 18°**耳**00'29 0°29'18 direct -3673 Feb 17 j 13:48 12°**8**52'10 min. Earth dist. -3666 Jan 06 j 11:35 17°**Ц**57'40 17.34178 AU -3673 May 01 j 06:30 15°**႘** direct -3666 Mar 22 j 20:08 15°**耳**54'06 max. Earth dist. -3673 Jun 08 j 10:12 17°**8**14'10 19.53445 AU max. Earth dist. -3666 Jul 12 j 09:37 20°**Ⅲ**21'41 19.33437 AU conjunction -3673 Jun 09 j 15:45 17°**8**18'43 0°01'51 conjunction -3666 Jul 13 j 15:01 20°**Ⅲ**26'18 0°27'59 minimum elong -3673 Jun 09 j 15:45 17°**8**18'43 minimum elong -3666 Jul 13 j 15:01 20°**Ⅲ**26'18 behind sun begin -3673 Jun 09 i 08:59 17°**8**17'42 retrograde -3666 Oct 29 i 03:01 24° **II** 48'56 behind sun end -3673 Jun 09 j 22:32 17°**8**19'44 opposition -3665 Jan 10 j 10:39 22°**I**I47'00 0°32'59 retrograde -3673 Sep 26 j 08:07 21°839'33 min. Earth dist. -3665 Jan 11 j 12:49 22° **1**44'10 17.32907 AU opposition -3673 Dec 08 j 17:43 19°\(\mathbf{3}\)37'12 0°04'10 direct -3665 Mar 27 j 23:35 20° **1** 40'34 min. Earth dist. -3673 Dec 09 j 18:20 19°\(\arrow\) 34'31 17.51254 AU -3672 Feb 22 j 13:25 17°**8**31'30 -3665 Jul 18 j 18:11 25°**Ⅲ**13'00 0°31'11 direct conjunction -3665 Jul 18 j 18:10 25° **Ⅲ**13'00 0°31'20 minimum elong -3672 Jun 13 j 18:36 21°859'13 0°05'47 -3665 Jul 17 j 12:13 25°**Д**08'17 19.32400 AU conjunction max. Earth dist. -3665 Nov 03 j 03:07 29°**Д**35'35 -3672 Jun 13 j 18:36 21°**8**59'13 0°05'54 minimum elong retrograde behind sun begin -3672 Jun 13 j 12:09 21°**8**58'15 -3664 Jan 15 j 11:44 27° **II** 33'41 0°36'27 opposition -3672 Jun 14 j 01:03 22°**8**00'12 -3664 Jan 16 j 12:56 27°**I**I30'57 17.32110 AU behind sun end min. Earth dist. max. Earth dist. -3672 Jun 12 j 12:28 21°**8**54'34 19.49132 AU -3664 Apr 01 j 04:12 25°**Ⅲ**27'11 direct -3672 Sep 30 j 05:29 26°**8**20'30 retrograde -3672 Dec 12 j 14:43 24°8 18'12 0°08'32 -3664 Jul 22 j 21:10 29°**Ⅲ**59'43 0°34'10 opposition conjunction -3664 Jul 22 j 21:10 29°**Д**59'43 0°34'19 -3672 Dec 13 j 16:42 24°8 15'21 17.47206 AU min. Earth dist. minimum elong -3671 Feb 26 j 11:14 22°**8**12'18 -3664 Jul 21 j 17:16 29°**Ⅲ**55'19 19.31845 AU direct max. Earth dist. -3664 Jul 22 j 22:59 0ಂತಾ conjunction -3671 Jun 18 j 21:31 26°**8**41'05 0°09'41 retrograde -3664 Nov 07 j 02:41 4°9522'08 -3671 Jun 18 j 21:32 26°**8**41'05 0°09'47 opposition -3663 Jan 19 j 13:24 2°520'16 0°39'39 minimum elong behind sun begin -3671 Jun 18 j 16:03 26°**8**40'15 min. Earth dist. -3663 Jan 20 j 14:07 2°517'36 17.31802 AU behind sun end -3671 Jun 19 j 03:01 26°**8**41'55 -3663 Apr 06 j 08:13 0°9513'46 direct max. Earth dist. -3671 Aug 17 j 23:33 -3663 Jul 27 j 23:22 4°5946'12 0°36'55 $\Pi^{\circ}0$ conjunction -3671 Oct 05 j 06:16 1°**Ⅱ**02'47 -3663 Jul 27 j 23:22 4°5946'12 0°37'03 retrograde minimum elong -3671 Nov 23 j 19:29 30°R℃ -3663 Jul 26 i 19:36 max. Earth dist. 4°5541'49 19.31806 AU -3671 Dec 17 j 12:16 29°800'32 0°12'53 -3663 Nov 12 i 02:33 opposition retrograde 9°9508'25 min. Earth dist. -3671 Dec 18 i 13:33 28° **8**57'46 17.43667 AU opposition -3662 Jan 24 i 15:11 7°506'34 0°42'34 direct -3670 Mar 03 j 12:05 26° 854'31 min. Earth dist. -3662 Jan 25 i 14:46 7°504'01 17.32043 AU -3670 Jun 01 i 02:51 $0^{\circ}II$ direct -3662 Apr 11 j 12:22 5°900'03 max. Earth dist. -3670 Jun 22 j 18:39 1°**Д**19'33 19.42046 AU max. Earth dist. -3662 Aug 01 j 00:01 9°528'16 19.32328 AU -3670 Jun 24 j 00:53 1°**II**24'15 0°13'33 -3662 Aug 02 j 01:18 9°532'16 0°39'24 conjunction conjunction 1°**II**24'15 0°13'41 minimum elong -3670 Jun 24 j 00:53 minimum elong -3662 Aug 02 j 01:18 9°932'16 0°39'32 1°**Ⅱ**23'43 behind sun begin -3670 Jun 23 j 21:22 retrograde -3662 Nov 17 j 02:14 13°554'12 -3661 Jan 29 j 17:04 11°\$52'23 behind sun end -3670 Jun 24 j 04:25 1°**I**I24'47 opposition 0°45'11 retrograde -3670 Oct 10 j 04:19 5°**Ⅱ**46'17 min. Earth dist. -3661 Jan 30 j 15:20 11°549'59 17.32846 AU -3670 Dec 22 j 10:37 3°**II**44'08 0°17'10 -3661 Apr 16 j 16:26 9°**©**45'55 opposition direct -3670 Dec 23 j 13:11 3°**Д**41'13 17.40621 AU -3661 Aug 06 j 02:07 14°513'54 19.33435 AU min. Earth dist. max. Earth dist. -3669 Mar 08 j 11:26 1°**Ⅲ**37'59 direct -3669 Jun 27 j 21:25 6°**Ц**03'44 19.39235 AU max. Earth dist. conjunction -3661 Aug 07 j 02:36 14°\$17'46 0°41'36 minimum elong -3661 Aug 07 j 02:35 14°517'46 0°41'44 conjunction -3669 Jun 29 j 04:22 6°**I**108'34 0°17'20 retrograde -3661 Nov 22 j 01:42 18°539'22 minimum elong -3669 Jun 29 j 04:21 6°**Ⅲ**08'34 0°17'28 opposition -3660 Feb 03 j 19:15 16°€37'36 0°47'29 retrograde -3669 Oct 15 j 05:17 10°**Ⅲ**30′53 min. Earth dist. -3660 Feb 04 j 16:14 16°535'20 17.34270 AU -3669 Dec 27 j 09:38 8°II28'47 0°21'22 -3660 Apr 20 j 20:01 14°531'14 opposition direct min. Earth dist. -3669 Dec 28 j 11:27 8°**Ⅲ**25'58 17.38035 AU -3660 Aug 10 j 05:27 18°559'08 19.35173 AU max. Earth dist.

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-3652 Sep 17 j 02:20 $26^{\circ}\Omega$ 27'04 19.67861 AU -3651 Mar 18 j 14:45 28° Ω 43'47 17.70625 AU max. Earth dist. -3651 Sep 21 j 23:33 1° Mp 02'10 19.73420 AU conjunction -3658 Aug 21 j 02:40 28°\$29'59 0°46'27 retrograde -3650 Jan 07 j 02:31 5° m 18'30 minimum elong -3658 Aug 21 j 02:40 28°529'59 0°46'35 opposition -3650 Mar 23 j 12:00 3° Mp 18'01 0°51'26 -3658 Sep 14 j 07:06 $0^{\circ}\Omega$ min. Earth dist. -3650 Mar 23 j 13:55 3° Mp 17'49 17.76277 AU retrograde -3658 Dec 05 j 23:57 2°**Ω**50′21 direct -3650 Jun 08 j 19:09 1° m 14'52 opposition -3657 Feb 18 j 01:55 0°Ω48'56 0°52'23 min. Earth dist. -3657 Feb 18 i 16:41 0°**Ω**47'22 17.42261 AU conjunction -3650 Sep 26 i 19:04 5° m 35'18 0° 45'36 -3657 Mar 09 i 16:57 30°RS minimum elong -3650 Sep 26 i 19:04 5° m 35'18 0°45'41 direct -3657 May 06 i 06:35 28°543'18 max. Earth dist. -3650 Sep 26 i 17:45 5° m 35'05 19.79173 AU -3649 Jan 11 j 22:24 -3657 Jun 30 i 10:25 $0^{\circ}\Omega$ retrograde 9° m 50'27 max. Earth dist. -3657 Aug 25 j 09:45 3°**Ω**10'00 19.44069 AU -3649 Mar 28 j 11:38 7° m 50'01 0°49'57 opposition min. Earth dist. -3649 Mar 28 j 10:38 7° m 50'07 17.82116 AU -3657 Aug 26 j 01:23 3°Ω12'28 0°47'27 -3649 Jun 13 j 18:52 5° m 47'12 conjunction direct -3657 Aug 26 j 01:23 3°Ω12'28 0°47'35 minimum elong -3649 Oct 01 j 11:16 10° Mp 06'04 0°44'09 -3657 Dec 10 j 22:02 7°**£**32′21 retrograde conjunction -3649 Oct 01 j 11:16 10° Mp 06'04 0°44'12 -3656 Feb 23 j 04:08 5°Ω31'06 0°53'19 opposition minimum elong -3656 Feb 23 j 17:53 5°**Ω**29'38 17.46057 AU -3649 Oct 01 j 13:19 10° m 06'23 19.85102 AU min. Earth dist. max. Earth dist. -3656 May 10 j 09:03 -3648 Jan 16 j 16:03 14° M 20'25 direct 3°**Ω**25'48 retrograde -3648 Apr 01 j 10:46 12° Mp 20'01 0°48'10 opposition -3648 Apr 01 j 08:16 12° Mp 20'17 17.88137 AU -3656 Aug 29 j 23:24 7°Ω54'01 0°48'09 conjunction min. Earth dist. -3648 Jun 17 j 16:43 10° Mp 17'32 -3656 Aug 29 j 23:24 7°Ω54'01 0°48'15 minimum elong direct -3656 Aug 29 j 09:49 7° **Ω**51'53 19.48114 AU max. Earth dist. retrograde -3656 Dec 14 j 20:53 $12^{\circ}\Omega 13'22$ conjunction -3648 Oct 05 j 02:24 14° m 34'48 0°42'26 -3648 Oct 05 j 02:25 14° m 34'48 0°42'29 opposition -3655 Feb 27 j 06:12 $10^{\circ}\Omega$ 12'17 0° 53'53 minimum elong -3648 Oct 05 j 05:47 14° m 35'20 19.91232 AU min. Earth dist. -3655 Feb 27 j 16:59 10°Ω11'08 17.50313 AU max. Earth dist. direct -3655 May 15 j 12:51 8°**Ω**07'20 retrograde -3647 Jan 20 j 10:19 18° Mp 48'20 -3647 Apr 06 j 09:05 16° Mp 47'58 0°46'06 opposition -3655 Sep 03 j 20:38 12°**Q**34'30 0°48'30 min. Earth dist. -3647 Apr 06 j 03:40 16° Mp 48'32 17.94376 AU conjunction -3655 Sep 03 j 20:38 12°**Q**34'30 0°48'37 -3647 Jun 22 j 14:24 14° M 45'50 minimum elong direct max. Earth dist. -3655 Sep 03 j 09:36 12° **Ω**32'46 19.52573 AU -3655 Oct 14 i 15:00 15° Ω -3647 Oct 09 i 16:47 19° m 01'31 0°40'29 conjunction -3655 Dec 19 i 17:42 $16^{\circ}\Omega$ 53'15 -3647 Oct 09 i 16:47 19° m 01'31 0°40'30 retrograde minimum elong -3654 Mar 01 i 07:30 15°RΩ -3647 Oct 09 j 23:41 19° m 02'34 19.97570 AU max. Earth dist. $-3654 \text{ Mar } 04 \text{ j } 08:10 \quad 14^{\circ} \Omega 52'20 \quad 0^{\circ} 54'06$ -3646 Jan 25 i 03:05 23° m 14'13 opposition retrograde opposition min. Earth dist. $-3654 \text{ Mar } 04 \text{ i } 18:03 \quad 14^{\circ} \Omega 51'17 \quad 17.54961 \text{ AU}$ -3646 Apr 11 i 06:46 21° m 13'55 0°43'47 direct $-3654 \text{ May } 20 \text{ j } 15:00 \quad 12^{\circ} \Omega 47'46$ min. Earth dist. -3646 Apr 10 j 23:27 21° Mp 14'40 18.00810 AU -3654 Aug 02 j 13:14 15°**Ω** direct -3646 Jun 27 j 11:22 19° m 12'09 conjunction -3654 Sep 08 j 17:10 17° Ω 13'45 0°48'33 conjunction -3646 Oct 14 j 06:11 23° Mp 26'14 0°38'18 minimum elong -3654 Sep 08 j 17:10 17° Ω 13'45 0°48'38 minimum elong -3646 Oct 14 j 06:12 23° m 26'14 0°38'18 max. Earth dist. -3654 Sep 08 j 07:39 17°Ω12'15 19.57396 AU max. Earth dist. -3646 Oct 14 j 14:21 23° m 27'29 20.04105 AU -3654 Dec 24 j 15:23 21°**Ω**31'52 retrograde retrograde -3645 Jan 29 j 19:42 27° Mp 38'09 -3653 Mar 09 j 09:33 $19^{\circ}\Omega$ 31'05 0° 53'57 -3645 Apr 16 j 03:36 25° m 37'55 0°41'14 opposition opposition -3653 Mar 09 j 16:30 19° **Ω**30'22 17.59929 AU -3645 Apr 15 j 17:40 25° m 38'57 18.07439 AU min. Earth dist. min. Earth dist. -3653 May 25 j 18:06 $17^{\circ}\Omega$ 26'53 direct -3645 Jul 02 j 06:45 23° M 36'34 direct conjunction -3653 Sep 13 j 13:02 $21^{\circ}\Omega$ 51'37 $0^{\circ}48'16$ conjunction -3645 Oct 18 j 19:00 27° m/49'05 0°35'55 minimum elong -3653 Sep 13 j 13:02 $21^{\circ}\Omega$ 51'37 $0^{\circ}48'21$ minimum elong -3645 Oct 18 j 19:00 27° Mp 49'06 0°35'55 max. Earth dist. -3653 Sep 13 j 06:16 21° Ω50'33 19.62502 AU max. Earth dist. -3645 Oct 19 j 06:34 27° m 50'51 20.10812 AU retrograde -3653 Dec 29 j 11:02 26° Ω09'03 -3645 Nov 25 j 07:10 0∘**⊽** -3652 Mar 13 j 10:57 $24^{\circ}\Omega 08'24 \quad 0^{\circ}53'27$ -3644 Feb 03 j 11:37 2°**2**00'13 opposition retrograde

-3644 Apr 19 j 23:56

opposition

0°**2**00'07 0°38'27

min. Earth dist.

-3652 Mar 13 j 16:57 $24^{\circ}\Omega$ 07'47 17.65164 AU

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Earth dist. 2°**♀**12'06 20.17632 AU direct -3636 Aug 10 j 04:09 2°M01'19 -3643 Feb 07 j 02:59 retrograde 6°**£**20'34 opposition -3643 Apr 24 j 19:32 4°**2**20'34 0°35'28 conjunction -3636 Nov 24 j 08:42 6°M01'13 0°08'00 min. Earth dist. -3643 Apr 24 j 05:25 4°**£**22'01 18.21063 AU minimum elong -3636 Nov 24 j 08:41 6°ML01'13 0°07'56 -3643 Jul 10 j 19:36 -3636 Nov 24 j 02:48 direct 2°**₽**20'07 behind sun begin $6^{\circ}\text{ML}00'23$ -3636 Nov 24 j 14:34 behind sun end 6° Mc02'04 conjunction -3643 Oct 26 j 18:11 6°**2**29'33 0°30'35 max. Earth dist. -3636 Nov 25 j 08:52 6°ML04'47 20.67793 AU minimum elong -3643 Oct 26 j 18:12 6°**₽**29'33 0°30'35 retrograde -3635 Mar 13 j 09:05 10°M06'26 max. Earth dist. -3643 Oct 27 j 09:58 6°**£**31'57 20.24498 AU min. Earth dist. -3635 May 29 j 06:07 8°M09'25 18.70355 AU retrograde -3642 Feb 11 j 17:52 10°**△**39'13 opposition -3635 May 30 j 06:11 8° ML07'01 0°06'51 opposition -3642 Apr 29 j 14:13 8°**₽**39'22 0°32'19 direct -3635 Aug 14 j 14:10 6°M09'22 min. Earth dist. -3642 Apr 28 j 22:11 8°**£**41'00 18.27914 AU direct -3642 Jul 15 j 13:44 6°**£**39'22 conjunction -3635 Nov 28 j 15:37 10°ML08'07 0°04'33 minimum elong -3635 Nov 28 j 15:37 10°ML08'07 0°04'27 conjunction -3642 Oct 31 j 04:46 10° **2**47'19 0°27'40 behind sun begin -3635 Nov 28 j 09:12 10° ML07'12 minimum elong -3642 Oct 31 i 04:46 10° **2**47'19 0°27'39 behind sun end -3635 Nov 28 j 22:02 10° ML09'02 max. Earth dist. -3642 Oct 31 i 21:22 10° **2**49'49 20.31325 AU max. Earth dist. -3635 Nov 29 i 17:31 10° ML11'55 20.72806 AU retrograde -3641 Feb 16 j 08:12 14°**£**56'18 retrograde -3634 Mar 17 j 19:31 14°M 12'46 -3641 May 04 j 08:26 12° **2**56'34 0°28'59 -3634 Jun 03 j 18:53 12°ML13'20 0°03'01 opposition opposition -3641 May 03 j 14:58 12° **2**58'20 18.34706 AU min. Earth dist. -3634 Jun 02 j 17:08 12°M 15'55 18.75223 AU min Earth dist -3641 Jul 20 j 04:58 10° **2**57'00 -3634 Aug 19 j 02:12 10°M 15'54 direct direct -3641 Nov 04 j 14:48 15°**£**03'31 0°24'37 -3634 Dec 02 j 21:55 14°M 13'35 0°01'03 conjunction conjunction -3641 Nov 04 j 14:48 15°**£**03'31 0°24'35 -3634 Dec 02 j 21:57 14°Ml3'35 minimum elong 0°00'57 minimum elong -3641 Nov 05 j 10:01 15°**Ω**06'24 20.38046 AU -3634 Dec 02 j 15:25 14°M 12'39 max. Earth dist. behind sun begin -3640 Feb 20 j 21:56 19°**2**11'48 -3634 Dec 03 j 04:29 14°ML14'31 behind sun end retrograde -3640 May 07 j 06:34 17°**2**14'10 18.41339 AU max. Earth dist. -3634 Dec 04 j 00:13 14°M 17'25 20.77536 AU min. Earth dist. -3640 May 08 j 01:56 17°**£**12'12 0°25'31 -3634 Dec 16 j 04:21 15°M opposition -3640 Jul 23 j 21:51 15°**£**13'03 -3633 Mar 21 j 21:56 18° M 17'44 direct desc. node -3633 Mar 22 j 04:47 18° 17'45 retrograde conjunction -3640 Nov 08 j 00:14 19°**2**18'09 0°21'27 min. Earth dist. -3633 Jun 07 j 05:27 16°ML20'53 18.79839 AU minimum elong -3640 Nov 08 j 00:14 19°**2**18'09 0°21'25 opposition -3633 Jun 08 j 07:11 16°ML18'18 0°00'-48 max. Earth dist. -3640 Nov 08 j 19:58 19°**£**21'06 20.44578 AU -3633 Jul 13 j 22:05 15°RM retrograde -3639 Feb 24 j 11:18 23°**£**25'48 direct -3633 Aug 23 j 10:17 14°M21'04 -3639 May 12 j 18:41 21°**£**26'17 0°21'56 -3633 Oct 01 j 15:27 15°M opposition min. Earth dist. -3639 May 11 j 22:30 21°**2**28'19 18.47768 AU -3639 Jul 28 j 11:23 19°**♀**27'31 -3633 Dec 07 j 03:58 18°ML17'45 0°-2'-29 direct conjunction -3633 Dec 07 j 03:57 18°ML17'45 minimum elong 0°02'36 -3639 Nov 12 j 09:16 23°**2**31'15 0°18'11 -3633 Dec 06 j 21:25 18° ML 16'49 conjunction behind sun begin -3639 Nov 12 j 09:16 23°**2**31'15 0°18'07 -3633 Dec 07 i 10:29 18°ML18'41 minimum elong behind sun end -3639 Nov 13 j 07:03 23°**2**34'30 20.50866 AU max. Earth dist. max. Earth dist. -3633 Dec 08 i 07:52 18°M21'50 20.82024 AU -3638 Feb 28 i 23:37 27°**△**38'15 retrograde retrograde -3632 Mar 25 j 15:03 22° M21'28 opposition opposition -3638 May 17 i 10:37 25° **△**38'49 0°18'15 -3632 Jun 11 i 18:41 20°M22'02 0°-4'-36 min. Earth dist. -3638 May 16 j 12:44 25° **2**41'01 18.53900 AU min. Earth dist. -3632 Jun 10 j 15:13 20°M24'47 18.84197 AU direct -3638 Aug 02 j 02:33 23°**△**40'23 direct -3632 Aug 26 j 20:44 18°M25'01 conjunction -3638 Nov 16 j 17:33 27°**Ω**42'48 0°14'50 conjunction -3632 Dec 10 j 09:43 22°M20'48 0°-5'-54 minimum elong -3638 Nov 16 j 17:33 27°**Ω**42'48 0°14'47 minimum elong -3632 Dec 10 j 09:42 22°M20'48 0°06'01 behind sun begin -3638 Nov 16 j 14:42 27°**£**42'24 behind sun begin -3632 Dec 10 j 03:28 22°M 19'55 behind sun end -3638 Nov 16 j 20:23 27°**△**43'13 behind sun end -3632 Dec 10 j 15:57 22°M21'41 -3638 Nov 17 j 15:34 27°**Ω**46'05 20.56834 AU -3632 Dec 11 j 13:48 22°M24'53 20.86247 AU max. Earth dist. max. Earth dist. -3638 Dec 27 j 11:26 -3631 Mar 29 j 23:51 26°M24'08 0°M retrograde -3631 Jun 15 j 02:27 24°M27'26 18.88297 AU retrograde -3637 Mar 05 j 11:29 1°**ጤ**49'11 min. Earth dist. 0°-8'-22 -3637 May 17 j 20:09 30°R **≏** opposition -3631 Jun 16 j 05:33 24°M24'43 min. Earth dist. -3637 May 21 j 03:40 29°**⊆**52'01 18.59713 AU direct -3631 Aug 31 j 03:39 22°M27'54 opposition -3637 May 22 j 01:56 29°**£**49'47 0°14'29 direct -3637 Aug 06 j 14:36 27°**♀**51'39 conjunction -3631 Dec 14 j 15:20 26°M22'53 0°-9'-15 -3637 Oct 19 j 02:23 minimum elong -3631 Dec 14 j 15:20 26°M22'53 0°09'22 behind sun begin -3631 Dec 14 j 09:49 26°M22'06 -3637 Nov 21 j 01:30 1°ML52'48 0°11'26 behind sun end -3631 Dec 14 j 20:51 26°M23'40 conjunction

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, page 19 Attention, astronomical year style is used: The year -3631 in astronomical counting style is the year 3632 BCE in historical counting style.

Attention, astronom	ical year style is used: The	he year -3631	in astronomical co	unting style is the year	3632 BCE in historical	counting style	·.
max. Earth dist.	-3631 Dec 15 j 20:39	26° ML 27° 08	20.90203 AU	direct	-3623 Oct 02 j 07:41	24° × 728'03	
	-3630 Mar 01 j 17:24	0° ∡ ¹					
retrograde	-3630 Apr 03 j 09:51	0° ∡ ¹25'53		conjunction	-3622 Jan 15 j 11:43	28° ∡ 19'46	0°-33'-6
	-3630 May 06 j 20:23	30°RM₊		minimum elong	-3622 Jan 15 j 11:43	28° ∡ 19'46	0°33'16
min. Earth dist.	-3630 Jun 19 j 11:15	28°M29'22	18.92097 AU	max. Earth dist.	-3622 Jan 16 j 14:59		
opposition	-3630 Jun 20 j 15:47	28°M26'30	0°-12'-4		-3622 Feb 14 j 14:41	0°ರ	
direct	-3630 Sep 04 j 12:27			retrograde	-3622 May 06 j 08:49	2° ප් 21'51	
	-3630 Dec 11 j 21:33	0° ∡ ¹		min. Earth dist.	-3622 Jul 22 j 09:52		19.06693 AU
	J			opposition	-3622 Jul 23 j 11:01	0° る 22'19	0°-37'-56
conjunction	-3630 Dec 18 j 20:34	24'10 ٪24	0°-12'-34	11	-3622 Aug 01 j 18:22		
minimum elong	-3630 Dec 18 j 20:34	0° ∡ 724′10		direct	-3622 Oct 06 j 14:24		
behind sun begin	-3630 Dec 18 j 16:22	0° х ⁷ 23'34			-3622 Dec 07 j 18:40	0°ਰ	
behind sun end	-3630 Dec 19 j 00:46	0° ∡ ¹24'45					
max. Earth dist.	-3630 Dec 20 j 01:49		20.93835 AU	conjunction	-3621 Jan 19 j 17:31	2°₹317'56	0°-35'-28
retrograde	-3629 Apr 07 j 18:34	4° ₹ ¹26'55		minimum elong	-3621 Jan 19 j 17:31	2° ප 17'56	
min. Earth dist.	-3629 Jun 23 j 21:55		18.95566 AU	max. Earth dist.	-3621 Jan 20 j 19:39		21.06474 AU
opposition	-3629 Jun 25 j 01:45	2° × ⁷ 27'33	0°-15'-43	retrograde	-3621 May 10 j 15:39	6° る 20'06	21.00.7.110
direct	-3629 Sep 08 j 18:47	0° ∡ 31'08	0 10 .5	opposition	-3621 Jul 27 j 17:56	4°る20'28	0°-40'-28
ancer	3023 Sep 00 j 10.17	0 7 31 00		min. Earth dist.	-3621 Jul 26 j 18:38		19.06237 AU
conjunction	-3629 Dec 23 j 02:00	4° ∡ 724'47	0°-15'-49	direct	-3621 Oct 10 j 18:00	2°る24'18	17.00257710
minimum elong	-3629 Dec 23 j 02:00	4° × ⁷ 24'47	0°15'57	direct	-3021 Oct 10 j 10.00	2 02410	
behind sun begin	-3629 Dec 23 j 00:53	4° × ⁷ 24'38	0 13 37	conjunction	-3620 Jan 23 j 23:48	6° ₹ 16'02	0°-37'-40
behind sun end	-3629 Dec 23 j 03:07	4° × ⁷ 24'57		minimum elong	-3620 Jan 23 j 23:48	6°පි16'02	
max. Earth dist.	-3629 Dec 24 j 08:05		20.97125 AU	max. Earth dist.	-3620 Jan 25 j 01:36		21.05815 AU
retrograde	-3628 Apr 11 j 04:25	8° × ⁷ 27'18	20.9/123 AU	retrograde	-3620 May 14 j 00:58	10°る1943	21.03613 AU
min. Earth dist.	-3628 Jun 27 j 06:09		18.98657 AU	min. Earth dist.	-3620 Jul 30 j 00:53		19.05376 AU
	·						
opposition	-3628 Jun 28 j 11:02	6° ∡ 728'00	0°-19'-16	opposition	-3620 Jul 31 j 00:19	8° る 18'35	0°-42'-48
direct	-3628 Sep 12 j 02:24	4° ∡ ³31'45		direct	-3620 Oct 14 j 00:32	6° る 22'18	
. ,.	2/20 D 2/: 07.10	00.70.4150	00 101 50		2610 1 27:06 16	100714110	00 201 42
conjunction	-3628 Dec 26 j 07:19	8° ∡ 124'52		conjunction	-3619 Jan 27 j 06:16		
minimum elong	-3628 Dec 26 j 07:19	8° ∡ 724'52	0°19'08	minimum elong	-3619 Jan 27 j 06:16		
max. Earth dist.	-3628 Dec 27 j 12:53		21.00000 AU	max. Earth dist.	-3619 Jan 28 j 06:47		21.04756 AU
retrograde	-3627 Apr 15 j 12:45			retrograde	-3619 May 18 j 08:31		
opposition	-3627 Jul 02 j 20:04			min. Earth dist.	-3619 Aug 03 j 09:14		
min. Earth dist.	-3627 Jul 01 j 16:27		19.01314 AU	opposition	-3619 Aug 04 j 06:45		0°-44'-56
direct	-3627 Sep 16 j 08:14	8° ∡ ³31'50		direct	-3619 Oct 18 j 03:55	10° る 20'27	
						_	
conjunction	-3627 Dec 30 j 12:50			conjunction	-3618 Jan 31 j 13:04		
minimum elong				•	-3618 Jan 31 j 13:04		
max. Earth dist.	-3627 Dec 31 j 18:41		21.02417 AU	max. Earth dist.	-3618 Feb 01 j 13:01		21.03343 AU
retrograde	-3626 Apr 19 j 22:39			retrograde	-3618 May 22 j 17:46		
min. Earth dist.	-3626 Jul 06 j 00:14			opposition	-3618 Aug 08 j 12:51		
opposition	-3626 Jul 07 j 04:27		0°-26'-4	min. Earth dist.	-3618 Aug 07 j 15:16		19.02546 AU
direct	-3626 Sep 20 j 15:14	12° ∡ ³31′28		direct	-3618 Oct 22 j 09:50	14°る18'55	
conjunction	-3625 Jan 03 j 18:20			conjunction	-3617 Feb 04 j 20:13		
minimum elong	-3625 Jan 03 j 18:20			minimum elong	-3617 Feb 04 j 20:13		
max. Earth dist.	-3625 Jan 04 j 23:14		21.04312 AU	max. Earth dist.	-3617 Feb 05 j 18:46		21.01578 AU
retrograde	-3625 Apr 24 j 06:10	20° ∡ ¹25'56		retrograde	-3617 May 27 j 01:52		
min. Earth dist.	3		19.05108 AU	opposition	-3617 Aug 12 j 19:07		
opposition	-3625 Jul 11 j 12:46	18° ∡ ¹26'39	0°-29'-16	min. Earth dist.	-3617 Aug 11 j 23:34	20° る 16'32	19.00615 AU
direct	-3625 Sep 24 j 20:30	16° ∡ ³30'42		direct	-3617 Oct 26 j 13:40	18° る 17'54	
conjunction	-3624 Jan 08 j 00:00	20° ∡ ¹22'44	0°-27'-52	conjunction	-3616 Feb 09 j 03:55		
minimum elong	-3624 Jan 08 j 00:00	20° ∡ ¹22'44	0°28'01	minimum elong	-3616 Feb 09 j 03:55		
max. Earth dist.	-3624 Jan 09 j 04:47	20° ∡ ¹26'52	21.05670 AU	max. Earth dist.	-3616 Feb 10 j 01:39		20.99486 AU
retrograde	-3624 Apr 27 j 16:20	24° ∡ ¹24'50		retrograde	-3616 May 30 j 11:37	26° ප 14'20	
opposition	-3624 Jul 14 j 20:34			min. Earth dist.	-3616 Aug 15 j 05:55	24° ප 16'17	18.98338 AU
min. Earth dist.	-3624 Jul 13 j 17:41	22° ∡ ³28'11	19.06177 AU	opposition	-3616 Aug 16 j 01:14	24° ප 14'18	0°-50'-2
direct	-3624 Sep 28 j 03:20	20° ₹ ′29'33		direct	-3616 Oct 29 j 19:07	22° る 17'32	
conjunction	-3623 Jan 11 j 05:47	24° ∡ °21′23	0°-30'-33	conjunction	-3615 Feb 12 j 12:10	26° ප 11'07	0°-45'-50
minimum elong	-3623 Jan 11 j 05:47	24° ₹ ′21′23	0°30'42	minimum elong	-3615 Feb 12 j 12:10		
max. Earth dist.	-3623 Jan 12 j 09:20	24° ∡ °25′19	21.06454 AU	max. Earth dist.	-3615 Feb 13 j 08:12	26° ප 13'59	20.97024 AU
retrograde	-3623 May 01 j 23:05	28° ∡ ¹23'27			-3615 May 10 j 00:01	0° ≈	
min. Earth dist.	-3623 Jul 18 j 03:02	26° ∡ ¹26'33	19.06691 AU	retrograde	-3615 Jun 03 j 20:06	0° ≈ 14'58	
opposition	-3623 Jul 19 j 03:59	26° ∡ ¹24'02	0°-35'-13		-3615 Jun 28 j 20:31	30°R₹	
	-				-		

•	nical year style is used: The			· //		, .	age 20
opposition	-3615 Aug 20 j 07:27			mining style is the year	-3607 Apr 07 j 14:37	0° ∺	•
min. Earth dist.	-3615 Aug 19 j 14:30			retrograde	-3607 Jul 07 j 10:54	2°) 58'41	
direct	-3615 Nov 02 j 23:36			opposition	-3607 Sep 21 j 16:56		0°-51'-47
	-3614 Feb 13 j 07:20	0° ≈		min. Earth dist.	-3607 Sep 21 j 14:45	0°) 57′56	18.59428 AU
	v				-3607 Oct 15 j 15:10	30°R ≈	
conjunction	-3614 Feb 16 j 21:05	0°≈12'15	0°-46'-51	direct	-3607 Dec 05 j 05:53	28° ≈ 58'25	
minimum elong	-3614 Feb 16 j 21:05	0°≈12'15	0°46'59		-3606 Jan 23 j 16:04	0°)	
max. Earth dist.	-3614 Feb 17 j 15:50	0° ≈ 14'55	20.94197 AU				
retrograde	-3614 Jun 08 j 06:35	4° ≈ 16'33		conjunction	-3606 Mar 22 j 20:45	3° ∺ 00′29	0°-46'-15
opposition	-3614 Aug 24 j 13:46	2° ≈ 16′27	0°-52'-16	minimum elong	-3606 Mar 22 j 20:45	3°) €00'29	0°46'21
min. Earth dist.	-3614 Aug 23 j 21:25	2° ≈ 18′08	18.92656 AU	max. Earth dist.	-3606 Mar 22 j 22:21		20.56459 AU
direct	-3614 Nov 07 j 05:30	0° ≈ 19'23		retrograde	-3606 Jul 12 j 00:45	7° ∺ 09'30	
				opposition	-3606 Sep 26 j 01:24		0°-50'-37
conjunction	-3613 Feb 21 j 06:27	4°≈14'23		min. Earth dist.	-3606 Sep 26 j 00:13		18.53454 AU
minimum elong	-3613 Feb 21 j 06:27	4°≈14'23	0°47'46	direct	-3606 Dec 09 j 15:36	3° ¥ 08'41	
max. Earth dist.	-3613 Feb 21 j 23:16		20.90948 AU			>/	
retrograde	-3613 Jun 12 j 15:38	8°≈19'13		conjunction	-3605 Mar 27 j 11:50	7° ★ 12'02	
opposition	-3613 Aug 28 j 20:27	6°≈19'04		minimum elong	-3605 Mar 27 j 11:50	7° ★ 12'02	
min. Earth dist.	-3613 Aug 28 j 06:47		18.89188 AU	max. Earth dist.	-3605 Mar 27 j 11:45		20.50408 AU
direct	-3613 Nov 11 j 10:22	4° ≈ 21'48		retrograde	-3605 Jul 16 j 13:03	11°) 21'46	0°-49'-10
. ,.	2612 F. 1 25 : 16 40	0017127	00 40! 10	opposition	-3605 Sep 30 j 10:28		
conjunction minimum elong	-3612 Feb 25 j 16:49 -3612 Feb 25 j 16:49	8°≈17'37 8°≈17'37	0°-48'-10	min. Earth dist.	-3605 Sep 30 j 11:38		18.47345 AU
minimum elong max. Earth dist.	,		0°48°18 20.87264 AU	direct	-3605 Dec 14 j 00:00	7° ∺ 20′27	
retrograde	-3612 Feb 26 j 07:47 -3612 Jun 16 j 03:11	8°≈1945 12°≈22'58	20.87204 AU	conjunction	-3604 Mar 31 j 03:49	110¥25100	00 42! 27
opposition	-3612 Sep 01 j 03:06	12 ≈22 38 10°≈22'44	0°-53'-29	minimum elong	-3604 Mar 31 j 03:49		
min. Earth dist.	-3612 Aug 31 j 14:29		18.85263 AU	max. Earth dist.	-3604 Mar 31 j 03:49		
direct	-3612 Nov 14 j 17:28	8°≈25'14	18.83203 AU	retrograde	-3604 Jul 20 j 04:12		20.44204 AU
direct	-3012 NOV 14 j 17.20	0 ~23 14		opposition	-3604 Oct 03 j 19:50		0°-47'-27
conjunction	-3611 Mar 01 j 03:51	12° ≈ 21'57	0°-48'-29	min. Earth dist.	-3604 Oct 03 j 22:06		
minimum elong	-3611 Mar 01 j 03:51	12°≈21'57	0°48'36	direct	-3604 Dec 17 j 10:51		10.11102110
max. Earth dist.	-3611 Mar 01 j 16:26		20.83095 AU	4.1.000	500 1 500 17 j 10.51	11 7(3500	
	-3611 Apr 19 j 23:18			conjunction	-3603 Apr 04 j 20:42	15°) 39'57	0°-41'-56
retrograde	-3611 Jun 20 j 12:31	16° ≈ 27'51		minimum elong	-3603 Apr 04 j 20:42		
Ü	-3611 Aug 23 j 03:41	15°R≈		max. Earth dist.	-3603 Apr 04 j 16:33		
opposition	-3611 Sep 05 j 10:15	14° ≈ 27'31	0°-53'-42	retrograde	-3603 Jul 24 j 17:57		
min. Earth dist.	-3611 Sep 05 j 00:29	14° ≈ 28'31	18.80858 AU	opposition	-3603 Oct 08 j 06:00		0°-45'-27
direct	-3611 Nov 18 j 22:56	12° ≈ 29'43		min. Earth dist.	-3603 Oct 08 j 10:29	17°)(49'17	18.34922 AU
	-3610 Feb 07 j 17:21	15° ≈		direct	-3603 Dec 21 j 20:20	15°) 49′01	
conjunction	-3610 Mar 05 j 15:23	16° ≈ 27'22	0°-48'-32	conjunction	-3602 Apr 09 j 14:09	19°) ₹56'36	0°-40'-1
minimum elong	-3610 Mar 05 j 15:23	16° ≈ 27'22	0°48'39	minimum elong	-3602 Apr 09 j 14:09	19° ¥ 56'36	0°40'03
max. Earth dist.	-3610 Mar 06 j 01:49	16° ≈ 28'51	20.78475 AU	max. Earth dist.	-3602 Apr 09 j 07:20	19° ¥ 55'36	20.31802 AU
retrograde	-3610 Jun 25 j 00:51	20° ≈ 33'50		retrograde	-3602 Jul 29 j 10:37		
opposition	-3610 Sep 09 j 17:30	18° ≈ 33'21		opposition	-3602 Oct 12 j 16:41		
min. Earth dist.	-3610 Sep 09 j 08:50		18.76013 AU	min. Earth dist.	-3602 Oct 12 j 22:25		18.28662 AU
direct	-3610 Nov 23 j 07:07	16° ≈ 35'14		direct	-3602 Dec 26 j 08:28	20° ∺ 06'06	
aoninyti	2600 M 10:02 41	2000-22152	00 40! 21	aanius -ti	2601 4 14:00 40	240W15112	00 271 51
conjunction	-3609 Mar 10 j 03:41		0°-48'-21	conjunction	-3601 Apr 14 j 08:48		
minimum elong max. Earth dist.	-3609 Mar 10 j 03:41 -3609 Mar 10 j 11:53		0°48'27	minimum elong max. Earth dist.	-3601 Apr 14 j 08:48 -3601 Apr 14 j 00:39		
	3		20./342/ AU				20.25517 AU
retrograde opposition	-3609 Jun 29 j 10:51 -3609 Sep 14 j 01:03		0°-53'-18	retrograde opposition	-3601 Aug 03 j 02:01 -3601 Oct 17 j 03:59		0°-40'-41
min. Earth dist.	-3609 Sep 13 j 19:11			min. Earth dist.	-3601 Oct 17 j 03:39		
direct	-3609 Nov 27 j 13:34		18.70779 AU	direct	-3601 Dec 30 j 19:29		18.22333 AU
311001	5007 1101 21 J 15.54	20 /011 10		311000	5001 Dec 50 j 17.29	2. /(23.12	
conjunction	-3608 Mar 13 j 16:42	24° ≈ 41'31	0°-47'-54	conjunction	-3600 Apr 18 j 04:19	28° ∺ 35'52	0°-35'-27
minimum elong	-3608 Mar 13 j 16:42		0°48'01	minimum elong	-3600 Apr 18 j 04:19	28° H 35'52	
max. Earth dist.	-3608 Mar 13 j 22:37		20.68038 AU	max. Earth dist.	-3600 Apr 17 j 17:00		20.19195 AU
retrograde	-3608 Jul 02 j 23:51				-3600 May 12 j 07:48	0° Υ	
opposition	-3608 Sep 17 j 08:48	26°≈48'23	0°-52'-41	retrograde	-3600 Aug 06 j 19:56	2° Y 49'37	
min. Earth dist.	-3608 Sep 17 j 04:03		18.65232 AU	opposition	-3600 Oct 20 j 16:04	0° Υ 48'02	0°-37'-54
direct	-3608 Nov 30 j 22:27	24° ≈ 49'30		min. Earth dist.	-3600 Oct 21 j 01:46		18.16004 AU
	·				-3600 Nov 08 j 21:19	30° ₹	
conjunction	-3607 Mar 18 j 06:24	28° ≈ 50′22	0°-47'-12	direct	-3599 Jan 03 j 09:08	28°) 46′19	
minimum elong	-3607 Mar 18 j 06:24	28° ≈ 50′22	0°47'17		-3599 Feb 26 j 13:44	0° Y	
max. Earth dist.	-3607 Mar 18 j 10:19	28° ≈ 50'56	20.62349 AU				

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3599 in astronomical counting style is the year 3600 BCE in historical counting style. 2°Υ58'35 0°-32'-49 -3599 Apr 23 i 00:47 direct -3591 Feb 08 j 05:33 4°840'27 conjunction -3599 Apr 23 j 00:48 2°Y'58'35 0°32'50 minimum elong 2°**Υ**56'43 20.12796 AU -3599 Apr 22 j 12:07 -3591 May 30 j 21:53 9°804'32 0°-5'-35 max. Earth dist. conjunction -3599 Aug 11 j 12:38 7°**Y**13′09 -3591 May 30 j 21:54 9°804'32 0°05'32 retrograde minimum elong -3599 Oct 25 j 04:55 5°Υ11'32 0°-34'-53 -3591 May 30 j 15:23 9°803'34 opposition behind sun begin -3599 Oct 25 j 16:47 5°Υ10'15 18.09569 AU -3591 May 31 j 04:25 9°805'30 min. Earth dist. behind sun end -3598 Jan 07 j 22:34 -3591 May 29 j 18:42 direct 3°**Y**′09′28 max. Earth dist. 9°**8**00'23 19.62983 AU -3591 Sep 16 j 22:37 13°**8**24'27 retrograde -3591 Nov 29 j 13:33 11°**8**22'05 0°-4'-1 7°**Υ**23'18 0°-29'-59 conjunction -3598 Apr 27 j 21:59 opposition -3598 Apr 27 j 21:59 minimum elong 7°**Υ**23'18 0°29'59 min. Earth dist. -3591 Nov 30 j 12:35 11°**8**19'34 17.60404 AU -3590 Feb 13 j 03:44 max. Earth dist. -3598 Apr 27 j 05:53 7°**Υ**20'54 20.06334 AU direct 9°**8**16'55 -3598 Aug 16 j 06:56 11°**Y**38'39 retrograde -3598 Oct 29 j 18:27 9°**Ƴ**36'57 -3590 Jun 04 j 23:56 13°842'16 0°-1'-41 opposition 0°-31'-37 conjunction min. Earth dist. -3598 Oct 30 j 08:09 9°**Ƴ**35'28 18.03084 AU minimum elong -3590 Jun 04 j 23:56 13°**8**42'16 0°01'37 direct -3597 Jan 12 j 13:42 7°Υ34'31 behind sun begin -3590 Jun 04 j 17:09 13°**8**41'16 behind sun end -3590 Jun 05 j 06:44 13°**8**43'17 conjunction -3597 May 02 j 20:09 11°**Y**49'55 0°-26'-56 max. Earth dist. -3590 Jun 03 j 19:09 13°**8**37'51 19.57894 AU minimum elong -3597 May 02 j 20:09 11°**Υ**49'55 -3590 Jun 26 j 08:34 15°**႘** max. Earth dist. -3597 May 02 j 02:50 11°**Y**47′20 19.99818 AU retrograde -3590 Sep 21 j 19:40 18°802'43 retrograde -3597 Aug 21 j 00:53 16°**Y**06′00 asc. node -3590 Nov 07 j 08:07 17°**8**07'16 opposition -3597 Nov 03 j 08:47 14°**Y**04'13 0°-28'-9 opposition -3590 Dec 04 j 08:56 16°800'20 0°00'19 min. Earth dist. -3597 Nov 04 i 00:22 14°**Υ**'02'32 17.96549 AU min. Earth dist. -3590 Dec 05 i 09:26 15°857'40 17.55554 AU direct -3596 Jan 17 j 06:06 12°**Y**01'24 -3590 Dec 28 i 09:26 15°R℃ direct -3589 Feb 18 i 00:43 13°\(254'53\) conjunction $-3596 \text{ May } 06 \text{ i } 18:57 \quad 16^{\circ} \Upsilon 18'19 \quad 0^{\circ} -23' -43$ -3589 Apr 09 i 13:41 15°8 -3596 May 06 j 18:57 16° Υ 18'19 0° 23'42max. Earth dist. -3589 Jun 08 j 21:35 18°8 17'02 19.53275 AU minimum elong -3596 May 05 j 22:14 16° Υ 15'13 19.93289 AU max Earth dist -3596 Aug 24 j 19:00 20°**Y**35'08 -3589 Jun 10 j 02:32 18°\begin{align*} 221'29 0°02'20 \end{align*} retrograde conjunction -3596 Nov 06 j 23:44 18°**Y**33'15 0°-24'-29 -3589 Jun 10 j 02:31 18°**8**21'29 opposition minimum elong 0°02'26 -3589 Jun 09 j 19:45 18°**8**20'28 -3596 Nov 07 j 17:13 18°**Υ**31'21 17.90046 AU min. Earth dist. behind sun begin -3595 Jan 20 j 23:00 16°**Y**30'00 -3589 Jun 10 j 09:17 18°**8**22'30 direct behind sun end -3589 Sep 26 j 18:54 22°**8**42'24 retrograde -3589 Dec 09 j 05:05 20°840'04 0°04'42 -3595 May 11 j 18:32 20°**Υ**'48'26 0°-20'-19 opposition conjunction -3595 May 11 j 18:33 20°**Y**48'26 0°20'17 -3589 Dec 10 j 05:16 20°837'25 17.51163 AU minimum elong min. Earth dist. -3595 May 10 j 21:02 20°**Y**45'12 19.86817 AU -3588 Feb 23 j 00:12 18°**8**34'24 max. Earth dist. direct -3595 Aug 29 j 14:09 25°**Y**05'56 -3588 Jun 12 j 23:39 22°857'33 19.49115 AU retrograde max. Earth dist. -3595 Nov 11 j 15:28 23°**Υ**'03'56 0°-20'-38 opposition min. Earth dist. -3595 Nov 12 j 10:16 23°**Y**01'53 17.83627 AU conjunction -3588 Jun 14 j 05:25 23°**8**02'09 0°06'15 direct -3594 Jan 25 j 17:57 21°**Y**00'16 minimum elong -3588 Jun 14 j 05:24 23°**8**02'09 0°06'22 behind sun begin -3588 Jun 13 j 23:02 23°**8**01'11 conjunction -3594 May 16 j 18:24 25°**Υ**20'10 0°-16'-48 behind sun end -3588 Jun 14 j 11:47 23°**8**03'07 -3594 May 16 j 18:24 25° **Y** 20'10 0° 16'45 retrograde -3588 Sep 30 j 17:01 27°**8**23'31 minimum elong max. Earth dist. -3594 May 15 j 18:02 25°**Y**16'29 19.80477 AU -3588 Dec 13 j 02:07 25°\(\mathbf{2}21'14\) 0°09'04 opposition -3594 Sep 03 j 08:41 29°**Y**38'20 min. Earth dist. -3588 Dec 14 j 03:44 25°8 18'26 17.47247 AU retrograde -3594 Nov 16 j 07:55 27°**Υ**36'12 0°-16'-39 -3587 Feb 26 j 22:23 23°**8**15'24 opposition direct -3594 Nov 17 j 04:31 27°**Υ**'33'58 17.77389 AU -3587 Jun 18 j 02:35 27° \(\mathbf{2}39'34\) 19.45431 AU min. Earth dist. max. Earth dist. -3593 Jan 30 j 12:40 25°**Y**32'07 direct -3587 Jun 19 i 08:37 27°**8**44'13 0°10'09 conjunction -3593 May 21 j 19:10 29°**Υ**'53'28 0°-13'-9 -3587 Jun 19 j 08:37 27°**8**44'13 conjunction minimum elong $-3593 \text{ May } 21 \text{ i } 19:10 \quad 29^{\circ} \Upsilon 53'28$ 0°13'06 behind sun begin -3587 Jun 19 i 03:18 27°843'25 minimum elong -3593 May 21 i 15:17 29° γ'52'53 behind sun end -3587 Jun 19 j 13:56 27°**8**45'02 behind sun begin behind sun end -3593 May 21 j 23:04 29°**Y**54'03 -3587 Jul 27 j 11:39 $\Pi^{\circ}0$ max. Earth dist. -3593 May 20 j 18:23 29°**Υ**49'43 19.74343 AU -3587 Oct 05 j 17:23 2°II06'00 retrograde -3593 May 23 j 14:13 0°**П**03'47 0°13'24 0°႘ opposition -3587 Dec 17 j 23:47 min. Earth dist. retrograde -3593 Sep 08 j 05:04 4°812'14 -3587 Dec 19 j 00:51 0°**Д**01'03 17.43787 AU -3587 Dec 19 j 10:26 30°R₩ opposition -3593 Nov 21 j 00:56 2°**8**10'01 0°-12'-32 -3586 Mar 03 j 23:35 27°**8**57'49 min. Earth dist. -3593 Nov 21 j 22:19 2°**8**07'41 17.71383 AU direct -3592 Feb 04 j 09:33 0°**8**05'32 -3586 May 13 j 18:08 $0^{\circ}\Pi$ direct max. Earth dist. -3586 Jun 23 j 05:52 2°**Ⅲ**22'53 19.42180 AU -3592 May 25 j 20:20 4°**8**28'16 0°-9'-24 conjunction 4°**8**28'16 0°09'20 -3586 Jun 24 j 12:03 2°**II**27'35 0°14'00 minimum elong -3592 May 25 j 20:20 conjunction 4°**8**27'26 behind sun begin -3592 May 25 j 14:41 minimum elong -3586 Jun 24 j 12:03 2°**II**27'35 0°14'07 4°**8**29'06 behind sun end -3592 May 26 j 01:59 behind sun begin -3586 Jun 24 j 08:53 2°**Ⅲ**27′06 max. Earth dist. -3592 May 24 j 17:12 4°**8**24'08 19.68484 AU behind sun end -3586 Jun 24 j 15:13 2°**Ⅲ**28′04 retrograde -3592 Sep 12 j 00:44 8°**8**47'37 retrograde -3586 Oct 10 j 16:01 6°**Ⅱ**49'41 -3592 Nov 24 j 18:55 6°845'19 0°-8'-18 -3586 Dec 22 j 22:22 4°II47'34 0°17'40 opposition opposition

min. Earth dist.

-3592 Nov 25 j 17:54

6°**8**42'48 17.65705 AU

min. Earth dist.

-3586 Dec 24 j 00:49

4°**Ⅱ**44'40 17.40757 AU

•	nical year style is used: The		-				age 22
direct	-3585 Mar 08 j 23:02	-	in astronomical cot	direct	-3577 Apr 17 j 04:09		•
	-3585 Jun 28 j 08:51		19.39358 AU	direct	-55// Apr 1/ J 04.09	10 2049 30	
max. Earth dist.	-3383 Jun 28 J 08:31	/-щ0/-13	19.39338 AU	· · · · · · · · · · · · ·	2577 A 07: 12:50	150621127	0941142
· · · · · · · · · · · ·	2505 1 20:15.42	70T1204	0017146	conjunction minimum elong	-3577 Aug 07 j 13:59		0°41'43
conjunction	-3585 Jun 29 j 15:42	7° Ⅱ 12'04		2	-3577 Aug 07 j 13:59		0°41'52
minimum elong	-3585 Jun 29 j 15:42	7° Ⅱ 12'04	0°1/54	max. Earth dist.	-3577 Aug 06 j 13:45		19.33665 AU
retrograde	-3585 Oct 15 j 16:50	11° II 34'25	0021140	retrograde	-3577 Nov 22 j 13:04		00.4712.6
opposition	-3585 Dec 27 j 21:25	9° Ⅱ 32'21		opposition min. Earth dist.	-3576 Feb 04 j 06:47		
min. Earth dist.	-3585 Dec 28 j 23:09		17.38140 AU		-3576 Feb 05 j 03:17		17.34376 AU
direct	-3584 Mar 13 j 02:02	7° Ⅱ 26′09		direct	-3576 Apr 21 j 06:49	13 2933 02	
conjunction	-3584 Jul 03 j 19:32	11°π57'27	0°21'26	conjunction	-3576 Aug 11 j 14:46	2000006123	0°43'36
minimum elong	-3584 Jul 03 j 19:32			minimum elong	-3576 Aug 11 j 14:46		0°43'43
max. Earth dist.	-3584 Jul 02 j 13:15			max. Earth dist.	-3576 Aug 10 j 17:19		
retrograde	-3584 Oct 19 j 15:50		17.50757 110	retrograde		24°927'37	17.55557 110
opposition	-3584 Dec 31 j 21:23		0°25'51	opposition	-3575 Feb 08 j 09:00		0°49'31
min. Earth dist.	-3583 Jan 02 j 00:05			min. Earth dist.	-3575 Feb 09 j 03:29		
direct	-3583 Mar 18 j 03:04		17.55757710	direct	-3575 Apr 26 j 11:15		17.50775710
conjunction	-3583 Jul 08 j 22:58	16° Ⅱ 43'30	0°24'58	conjunction	-3575 Aug 16 j 14:42	24° © 50'39	0°45'10
minimum elong	-3583 Jul 08 j 22:58	16° Ⅱ 43'30	0°25'05	minimum elong	-3575 Aug 16 j 14:42	24°950'39	0°45'18
max. Earth dist.	-3583 Jul 07 j 16:04	16° Ⅱ 38'39	19.34954 AU	max. Earth dist.	-3575 Aug 15 j 18:41	24°5947'29	19.38069 AU
retrograde	-3583 Oct 24 j 16:23	21° II 06'08		retrograde	-3575 Dec 01 j 12:02	29°5511'28	
opposition	-3582 Jan 05 j 21:40	19° Ⅱ 04'10	0°29'42	opposition	-3574 Feb 13 j 11:14	27°509'59	0°51'06
min. Earth dist.	-3582 Jan 06 j 23:21	19° Ⅱ 01'22	17.34172 AU	min. Earth dist.	-3574 Feb 14 j 04:27	27° © 08'09	17.39581 AU
direct	-3582 Mar 23 j 07:37	16° Ⅱ 57'47		direct	-3574 May 01 j 13:08	25°504'08	
max. Earth dist.	-3582 Jul 12 j 21:02	21° Ⅲ 25′21	19.33409 AU				
				conjunction	-3574 Aug 21 j 14:12	29° 5 34'09	0°46'27
conjunction	-3582 Jul 14 j 02:34			minimum elong	-3574 Aug 21 j 14:12	29° 5 34'09	0°46'34
minimum elong	-3582 Jul 14 j 02:34		0°28'28	max. Earth dist.	-3574 Aug 20 j 20:40		19.41160 AU
retrograde	-3582 Oct 29 j 15:08				-3574 Aug 28 j 09:58	0 $^{\circ}\Omega$	
opposition	-3581 Jan 10 j 22:23			retrograde	-3574 Dec 06 j 12:20	3° Ω 54'29	
min. Earth dist.	-3581 Jan 12 j 00:35		17.32860 AU	opposition	-3573 Feb 18 j 13:17	1° Ω 53'10	0°52'21
direct	-3581 Mar 28 j 10:13	21° Ⅱ 44'16		min. Earth dist.	-3573 Feb 19 j 04:09	1° Ω 51'35	17.42917 AU
max. Earth dist.	-3581 Jul 17 j 23:47	26° Ⅱ 11'59	19.32346 AU		-3573 Apr 14 j 17:23	30° ₹ 5	
				direct	-3573 May 06 j 17:59	29°547'37	
conjunction	-3581 Jul 19 j 05:46				-3573 May 28 j 12:06	0 \circ Ω	
minimum elong	-3581 Jul 19 j 05:46		0°31'37				
	-3581 Sep 27 j 02:47	0		conjunction	-3573 Aug 26 j 13:01	4° Ω 16'46	
retrograde	-3581 Nov 03 j 15:23	0°939'17		minimum elong	-3573 Aug 26 j 13:01	4° Ω 16'46	
	-3581 Dec 12 j 03:19	30°RⅡ		max. Earth dist.	-3573 Aug 25 j 21:17		19.44745 AU
opposition	-3580 Jan 15 j 23:31	28° ∏ 37'22		retrograde	-3573 Dec 11 j 09:30	8° Ω 36'36	
min. Earth dist.	-3580 Jan 17 j 00:33		17.32052 AU	opposition	-3572 Feb 23 j 15:35	6° Ω 35'25	
direct	-3580 Apr 01 j 15:45	26° Ⅲ 30′52		min. Earth dist.	-3572 Feb 24 j 05:25		17.46737 AU
	-3580 Jul 06 j 11:13	0°©		direct	-3572 May 10 j 19:52	4° Ω 30'11	
max. Earth dist.	-3580 Jul 22 j 04:49	0°959'00	19.31796 AU		2572 4 20:11.00	00 0 50121	0040102
. ,.	2500 1 1 22:00 27	1° © 03'23	0024125	conjunction minimum elong	-3572 Aug 30 j 11:00	8° Ω 58'21 8° Ω 58'21	0°48'02 0°48'09
conjunction	-3580 Jul 23 j 08:37			U	-3572 Aug 30 j 11:00		
minimum elong retrograde	-3580 Jul 23 j 08:37 -3580 Nov 07 j 14:14	1°503'23 5°525'49	0°34'34	max. Earth dist. retrograde	-3572 Aug 29 j 21:24 -3572 Dec 15 j 08:46	8°8 (36°12 13°Ω17'36	19.48783 AU
•	-3579 Jan 20 j 01:06		0020154	-	-3571 Feb 27 j 17:37		0952144
opposition min. Earth dist.	-3579 Jan 20 j 01:45	3°523'56	17.31772 AU	opposition min. Earth dist.	-3571 Feb 27 j 17.37 -3571 Feb 28 j 04:41	11° Ω 16'34	17.50960 AU
direct		1°917'25	17.31772 AU	direct		9° Ω 11'40	17.30900 AU
max. Earth dist.	-3579 Apr 06 j 19:41 -3579 Jul 27 j 07:15		19.31808 AU	direct	-3571 May 16 j 00:48	9 8611 40	
max. Latur dist.	-5577 Jul 27 J 07.15	3 3432)	17.51606 AC	conjunction	-3571 Sep 04 j 08:23	13° Ω 38'44	0°48'21
conjunction	-3579 Jul 28 j 10:53	5°949'50	0°37'07	minimum elong			
minimum elong	-3579 Jul 28 j 10:53	5°9549'50		max. Earth dist.	-3571 Sep 03 j 20:59		
retrograde	-3579 Nov 12 j 14:01	10°5012'04	-			15° Ω	
opposition	-3578 Jan 25 j 02:44	8°910'12	0°42'46	retrograde	-3571 Dec 20 j 04:48	17° Ω 57'22	
min. Earth dist.	-3578 Jan 26 j 02:00		17.32088 AU	opposition	-3570 Mar 04 j 19:23		0°53'54
direct	-3578 Apr 12 j 00:00	6°903'42		min. Earth dist.	-3570 Mar 05 j 05:38		
max. Earth dist.	-3578 Aug 01 j 11:46		19.32426 AU		-3570 Mar 27 j 22:38		
	Ę ,			direct	-3570 May 21 j 01:56		
conjunction	-3578 Aug 02 j 12:46	10°535'54	0°39'33		-3570 Jul 12 j 00:06		
minimum elong	-3578 Aug 02 j 12:46	10°535'54	0°39'41		·		
retrograde	-3578 Nov 17 j 13:47	14° © 57'51		conjunction	-3570 Sep 09 j 04:57	18° Ω 17'46	0°48'20
opposition	-3577 Jan 30 j 04:42	12°556'03	0°45'20	minimum elong	-3570 Sep 09 j 04:57	18° Ω 17'46	0°48'26
min. Earth dist.	-3577 Jan 31 j 02:42	12°553'40	17.33007 AU	max. Earth dist.	-3570 Sep 08 j 19:10	18° Ω 16'14	19.57922 AU
mm. Burm dist.							

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3570 in astronomical counting style is the year 3571 BCE in historical counting style. -3570 Dec 25 i 03:06 $22^{\circ}\Omega$ 35'44 retrograde retrograde -3561 Jan 30 j 06:15 28° m 38'37 $-3569 \text{ Mar } 09 \text{ j } 20:50 \quad 20^{\circ} \Omega 34'56 \quad 0^{\circ} 53'42$ -3561 Apr 16 j 13:41 26° m 38'26 0°40'42 opposition opposition min. Earth dist. -3569 Mar 10 j 04:10 $20^{\circ}\Omega$ 34'10 17.60402 AU min. Earth dist. -3561 Apr 16 j 03:34 26° Mp 39'29 18.07911 AU $-3569 \text{ May } 26 \text{ j } 05:40 \quad 18^{\circ} \Omega 30'41$ -3561 Jul 02 j 16:58 24° m 37'08 direct direct -3569 Sep 14 j 00:40 $22^{\circ}\Omega$ 55'17 0°48'01 -3561 Oct 19 j 05:37 28° mp 49'38 0°35'26 conjunction conjunction -3561 Oct 19 j 05:37 28° mg 49'38 0°35'26 $-3569 \text{ Sep } 14 \text{ j } 00:40 \quad 22^{\circ} \Omega 55'17 \quad 0^{\circ} 48'06$ minimum elong minimum elong -3561 Oct 19 j 17:11 28° m 51'24 20.11324 AU max. Earth dist. max. Earth dist. -3569 Dec 29 j 22:08 $27^{\circ}\Omega$ 12'33 -3561 Nov 07 j 15:58 retrograde 0∘**⊽** opposition -3568 Mar 13 j 22:07 $25^{\circ}\Omega$ 11'51 $0^{\circ}53'09$ retrograde -3560 Feb 03 j 21:34 3°**₾**00'44 min. Earth dist. -3568 Mar 14 j 04:30 $25^{\circ}\Omega$ 11'10 17.65522 AU opposition -3560 Apr 20 j 09:59 1°**₽**00'42 0°37'54 -3568 May 30 j 06:09 23°**Ω**07'56 -3560 Apr 19 j 22:04 direct min. Earth dist. 1°**೨**01'55 18.14744 AU -3560 May 16 j 07:59 30°R, Mp conjunction -3568 Sep 17 j 19:28 27° Ω31'08 0°47'23 direct -3560 Jul 06 j 11:30 28° m 59'52 minimum elong -3568 Sep 17 j 19:28 27° **Ω**31'08 0°47'28 -3560 Aug 24 j 09:19 0∘**⊽** max. Earth dist. -3568 Sep 17 j 13:43 27° **Ω**30'15 19.68165 AU -3568 Oct 30 j 00:48 0° m conjunction -3560 Oct 22 j 17:30 3°**2**10'50 0°32'50 retrograde -3567 Jan 02 j 19:11 1° Mp 47'40 minimum elong -3560 Oct 22 j 17:30 3°**♀**10'50 0°32'51 -3567 Mar 13 j 18:21 30°RΩ max. Earth dist. -3560 Oct 23 j 06:04 3°**2**12'45 20.18194 AU opposition $-3567 \text{ Mar } 18 \text{ j } 22:42 \quad 29^{\circ} \Omega 47'02 \quad 0^{\circ}52'15$ retrograde -3559 Feb 07 j 14:06 7°**≏**21'12 min. Earth dist. $-3567 \text{ Mar } 19 \text{ j } 02:01 \quad 29^{\circ} \Omega 46'41 \quad 17.70880 \text{ AU}$ opposition -3559 Apr 25 j 05:25 5°**£**21'18 0°34'55 direct $-3567 \text{ Jun } 04 \text{ i } 07:56 \quad 27^{\circ} \Omega 43'26$ min. Earth dist. -3559 Apr 24 i 15:22 5°**2**22'44 18.21634 AU -3567 Aug 18 j 15:48 direct -3559 Jul 11 j 05:32 3°**♀**20'55 0° m conjunction -3567 Sep 22 j 13:23 2° m 05'12 0°46'27 conjunction -3559 Oct 27 i 04:51 7°**♀**30'24 0°30'04 -3567 Sep 22 j 13:23 2° m 05'12 0°46'32 -3559 Oct 27 j 04:52 7°**♀**30'24 0°30'03 minimum elong minimum elong -3567 Sep 22 j 10:38 2° Mp 04'46 19.73635 AU max. Earth dist. -3559 Oct 27 j 20:24 7°**2**32'45 20.25067 AU max Earth dist -3566 Jan 07 j 13:11 6° m 20'57 -3558 Feb 12 j 04:27 11°**£**40'03 retrograde retrograde -3566 Mar 23 j 22:52 4° m 20'22 0°51'03 -3558 Apr 29 j 08:32 9°**2**41'53 18.28471 AU opposition min. Earth dist. -3566 Mar 24 j 01:04 4° M) 20'08 17.76458 AU -3558 Apr 30 j 00:14 9°**£**40'17 min. Earth dist. opposition 0°31'44 -3566 Jun 09 j 07:05 2°m/17'06 -3558 Jul 15 j 23:03 direct direct 7°**-**40′22 -3566 Sep 27 j 06:13 6° m 37'21 0°45'14 -3558 Oct 31 j 15:22 11° • 48'21 0° 27'09 conjunction conjunction -3558 Oct 31 j 15:22 11°**£**48'21 0°27'07 -3566 Sep 27 j 06:13 6° m 37'21 0°45'17 minimum elong minimum elong -3558 Nov 01 j 07:36 11°**♀**50'48 20.31857 AU -3566 Sep 27 j 04:51 6° Mg 37'08 19.79335 AU max. Earth dist. max. Earth dist. -3565 Jan 12 j 08:43 10° m 52'19 -3557 Feb 16 j 19:02 15°**⊆**57'18 retrograde retrograde -3565 Mar 28 j 22:14 8° mp 51'47 0°49'31 -3557 May 04 j 18:26 13°**⊆**57'39 0°28'24 opposition opposition min. Earth dist. -3565 Mar 28 j 21:17 8° M 51'53 17.82272 AU min. Earth dist. -3557 May 04 j 01:09 13° **2**59'24 18.35205 AU direct -3565 Jun 14 j 06:43 6° m 48'50 direct -3557 Jul 20 j 15:24 11°**⊆**58'08 -3565 Oct 01 j 22:18 11° m 07'34 0°43'45 conjunction conjunction -3557 Nov 05 j 01:31 16° **2**04'41 0° 24'05 -3565 Oct 01 j 22:18 11° m 07'34 0°43'48 -3557 Nov 05 j 01:31 16°**♀**04'41 0°24'03 minimum elong minimum elong max. Earth dist. -3565 Oct 02 j 00:20 11° m 07'53 19.85269 AU max. Earth dist. -3557 Nov 05 j 20:21 16°**£**07'30 20.38503 AU -3564 Jan 17 j 01:37 15° M 21'43 -3556 Feb 21 j 08:41 20°**£**12'55 retrograde retrograde -3564 Apr 01 j 21:15 13° Mp 21'15 0°47'42 -3556 May 08 j 11:53 18°**♀**13'23 0°24'55 opposition opposition -3564 Apr 01 j 18:44 13° mp 21'30 17.88331 AU min. Earth dist. min. Earth dist. -3556 May 07 i 17:00 18° **2**15'17 18.41749 AU -3564 Jun 18 j 04:12 11° **m** 18'40 -3556 Jul 24 j 07:39 16°**♀**14'16 direct direct -3564 Oct 05 j 13:13 15° m 35'49 0°42'00 -3556 Nov 08 j 10:53 20° **2**19'22 0°20'55 conjunction conjunction minimum elong -3564 Oct 05 i 13:13 15° m 35'49 0°42'02 minimum elong -3556 Nov 08 i 10:53 20° \(\Omega\) 19'22 0°20'52 max. Earth dist. -3564 Oct 05 j 16:42 15° mp 36'21 19.91461 AU max. Earth dist. -3556 Nov 09 j 06:06 20° **2**2'14 20.44932 AU retrograde -3563 Jan 20 j 20:24 19° mp 49'12 retrograde -3555 Feb 24 j 21:14 24° \alpha 26'56 -3563 Apr 06 j 19:25 17° mp 48'47 0°45'37 -3555 May 12 j 08:48 22°**2**29'27 18.48060 AU opposition min. Earth dist. -3563 Apr 06 j 13:45 17° mp 49'23 17.94649 AU min. Earth dist. opposition -3555 May 13 j 04:38 22°**£**27'27 0°21'20 direct -3563 Jun 23 j 01:34 15° Mp 46'36 direct -3555 Jul 28 j 21:54 20°**2**28'40 conjunction -3563 Oct 10 j 03:35 20° m 02'12 0°40'02 conjunction -3555 Nov 12 j 19:54 24°**£**32'23 0°17'38 -3563 Oct 10 j 03:35 20° m 02'12 0°40'03 -3555 Nov 12 j 19:55 24°**£**32'24 minimum elong minimum elong 0°17'35 -3563 Oct 10 j 10:31 20° m 03'16 19.97892 AU -3555 Nov 13 j 17:18 24°**Ω**35'35 20.51097 AU max. Earth dist. max. Earth dist. -3562 Jan 25 j 12:19 24° m 14'47 -3554 Mar 01 j 09:49 28°**♀**39'17 retrograde retrograde -3562 Apr 11 j 16:50 22° m 14'30 0°43'17 opposition opposition -3554 May 17 j 20:24 26°**△**39'50 0°17'39 min. Earth dist. -3562 Apr 11 j 09:29 22° m 15'15 18.01184 AU min. Earth dist. -3554 May 16 j 23:03 26° **△**41'59 18.54074 AU direct -3562 Jun 27 j 21:14 20° m 12'44 direct -3554 Aug 02 j 12:49 24°**£**41'22 conjunction -3562 Oct 14 j 16:58 24° m 26'47 0°37'50 conjunction -3554 Nov 17 j 04:09 28°**Ω**43'44 0°14'18 minimum elong -3562 Oct 14 j 16:58 24° m 26'47 0°37'51 -3554 Nov 17 j 04:09 28°**♀**43'44 0°14'14 minimum elong

behind sun begin

-3554 Nov 17 j 00:51 28°**♀**43'15

max. Earth dist.

-3562 Oct 15 j 01:08 24° m 28'02 20.04533 AU

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3554 in astronomical counting style is the year 3555 BCE in historical counting style. behind sun end -3554 Nov 17 i 07:26 28°**2**44'12 behind sun end -3548 Dec 11 j 01:46 23°M20'22 max. Earth dist. -3554 Nov 18 j 01:47 28° **2**46'56 20.56967 AU max. Earth dist. -3548 Dec 11 j 23:39 23°M23'34 20.86855 AU -3554 Dec 08 j 21:22 -3547 Mar 30 j 09:28 27° ML22'42 oom. retrograde -3547 Jun 15 j 11:33 25°M26'03 18.88968 AU retrograde -3553 Mar 05 j 20:47 2°M49'58 min. Earth dist. -3547 Jun 16 j 14:55 25° M 23'19-3553 May 22 j 11:39 0°M50'31 0°13'54 opposition opposition 0°-8'-51 -3547 Aug 31 j 13:49 23°M26'32 min. Earth dist. -3553 May 21 j 13:41 0°M52'44 18.59810 AU direct -3553 Jun 13 j 02:36 30°Ŗჲ 28°**♀**52'19 -3547 Dec 15 j 01:10 27°M21'28 direct -3553 Aug 07 j 01:01 conjunction 0°-9'-41 -3547 Dec 15 j 01:09 27°M21'28 0°09'49 -3553 Sep 28 j 04:12 0°M minimum elong -3547 Dec 14 j 19:46 27°M20'42 behind sun begin conjunction -3553 Nov 21 j 11:52 2°M53'22 0°10'55 behind sun end -3547 Dec 15 j 06:32 27° M22'14 -3553 Nov 21 j 11:52 -3547 Dec 16 j 06:36 27° ML 25'44 20.90929 AU minimum elong 2°M53'22 0°10'51 max. Earth dist. -3553 Nov 21 j 06:50 -3546 Feb 02 j 14:43 behind sun begin 2°M52'38 0°**∡**¹ behind sun end -3553 Nov 21 j 16:54 2°M54'05 retrograde -3546 Apr 03 j 19:17 1°×724'22 max. Earth dist. -3553 Nov 22 j 11:39 2°M56'53 20.62561 AU -3546 Jun 06 j 06:23 30°RM retrograde -3552 Mar 09 j 08:16 6°M58'58 min. Earth dist. -3546 Jun 19 j 20:32 29°M27'55 18.92866 AU min. Earth dist. -3552 May 25 j 02:21 5°ML01'53 18.65264 AU opposition -3546 Jun 21 j 01:09 29°M25'03 0°-12'-32 opposition -3552 May 26 j 02:00 4°M59'30 0°10'07 direct -3546 Sep 04 j 22:46 27°M28'31 direct -3552 Aug 10 j 14:18 3°ML01'33 -3546 Nov 24 j 23:26 0°×7 conjunction -3552 Nov 24 j 18:59 7°**ጤ**01'20 0°07'30 conjunction -3546 Dec 19 j 06:30 1°**∡**¹22'45 0°-12'-59 minimum elong -3552 Nov 24 i 18:59 7°ML01'21 0°07'24 minimum elong -3546 Dec 19 i 06:30 1°**∡**22'45 0°13'06 behind sun begin -3552 Nov 24 j 13:00 7° 11 00'29 behind sun begin -3546 Dec 19 i 02:31 1°×22'11 behind sun end -3552 Nov 25 i 00:59 7°M02'12 behind sun end -3546 Dec 19 i 10:29 1°**х** 23′19 max. Earth dist. -3552 Nov 25 i 19:05 7°ML04'53 20.67885 AU max. Earth dist. -3546 Dec 20 i 11:38 1°**х** 26′58 20.94643 AU -3551 Mar 13 j 18:16 11° ML06'21 -3545 Apr 08 j 03:54 5°**₹**25'25 retrograde retrograde opposition -3551 May 30 j 15:30 9°ML06'52 0°06'18 -3545 Jun 24 j 07:20 3°**∡**128'57 18.96395 AU min. Earth dist. -3551 May 29 j 15:28 9°ML09'17 18.70481 AU -3545 Jun 25 j 11:10 3°**₹**¹26'10 0°-16'-10 min. Earth dist. opposition -3551 Aug 15 j 00:44 7°ML09'08 -3545 Sep 09 j 04:17 1°×29'50 direct direct 5°**∡**123'28 0°-16'-13 -3551 Nov 29 j 01:48 11°M 07'47 0°04'04 -3545 Dec 23 j 11:55 conjunction conjunction -3551 Nov 29 j 01:47 11°ML07'47 0°03'59 -3545 Dec 23 j 11:55 minimum elong minimum elong 5°**х** 23′28 0°16'22 -3551 Nov 28 j 19:19 11°ML06'51 -3545 Dec 24 j 18:00 behind sun begin max. Earth dist. 5°**∡**'27'49 20.97961 AU -3551 Nov 29 j 08:14 11°ML08'42 -3544 Apr 11 j 13:53 9°**х** 25′56 behind sun end retrograde -3551 Nov 30 j 03:50 11°ML11'36 20.72979 AU -3544 Jun 28 j 20:33 7°**₹**26'44 0°-19'-42 max. Earth dist. opposition -3550 Feb 23 j 23:24 15°ML -3544 Jun 27 j 15:54 7°**尽**29'36 18.99482 AU min. Earth dist. -3550 Mar 18 j 04:50 15° 112'14 -3544 Sep 12 j 12:33 retrograde direct 5°**х** 30′35 -3550 Apr 09 j 19:17 15°RML min. Earth dist. -3550 Jun 03 j 02:27 13°ML15'21 18.75459 AU conjunction -3544 Dec 26 j 17:20 9°**х** 23'43 0°-19'-22 opposition -3550 Jun 04 j 04:15 13°ML12'45 0°02'28 minimum elong -3544 Dec 26 j 17:20 9°**х** 23′43 0°19′30 direct -3550 Aug 19 j 12:04 11°**M**.15'15 max. Earth dist. -3544 Dec 27 j 22:34 9°**尽**27'55 21.00801 AU -3550 Nov 29 j 16:25 15°M retrograde -3543 Apr 15 j 22:09 13° ₹ 26'01 -3543 Jul 02 j 02:13 11° ₹ 29'35 19.02078 AU min. Earth dist. -3550 Dec 03 j 07:54 15°ML12'49 0°00'34 -3543 Jul 03 j 05:29 11° ₹26'52 0°-23'-8 conjunction opposition -3550 Dec 03 j 07:53 15°ML12'49 direct -3543 Sep 16 j 17:22 9° **₹** 30'51 minimum elong 0°00'28 -3550 Dec 03 i 01:22 15°ML11'54 behind sun begin -3550 Dec 03 i 14:24 15°ML13'45 -3543 Dec 30 i 22:55 13° ₹23'33 0°-22'-25 behind sun end conjunction -3550 Dec 04 j 10:13 15°M 16'40 20.77840 AU -3543 Dec 30 j 22:55 13° ₹23'33 0°22'34 max. Earth dist. minimum elong -3549 Jan 30 j 22:42 18°M 15'17 -3542 Jan 01 j 04:30 13°**₹**27'48 21.03130 AU desc. node max. Earth dist. retrograde -3549 Mar 22 i 14:18 19° ML16'49 retrograde -3542 Apr 20 i 07:47 17° ₹ 25'44 -3549 Jun 08 j 16:32 17°ML17'20 0°-1'-19 min. Earth dist. -3542 Jul 06 j 10:15 15° ₹29'21 19.04128 AU opposition min. Earth dist. -3549 Jun 07 j 14:29 17° ML 19'57 18.80220 AU opposition -3542 Jul 07 j 14:02 15°**尽** 26'34 0°-26'-26 -3549 Aug 23 j 20:55 15°M20'04 direct direct -3542 Sep 21 j 01:00 13° ₹30'39 conjunction -3549 Dec 07 j 13:57 19°ML16'40 0°-2'-56 conjunction -3541 Jan 04 j 04:16 17° ₹ 22'59 0°-25'-21 minimum elong -3549 Dec 07 j 13:57 19°ML16'40 0°03'03 minimum elong -3541 Jan 04 j 04:16 17°**又** 22'59 0°25'30 -3549 Dec 07 j 07:26 19°M15'45 behind sun begin max. Earth dist. -3541 Jan 05 j 08:40 17°**又**27'03 21.04896 AU -3549 Dec 07 j 20:28 19°Ml17'35 retrograde -3541 Apr 24 j 16:08 21° ₹25'06 behind sun end -3549 Dec 08 j 18:02 19°M20'46 20.82481 AU -3541 Jul 11 j 22:24 19° **₹** 25'53 max. Earth dist. opposition 0°-29'-37 -3548 Mar 26 j 00:25 23°M20'14 -3541 Jul 10 j 20:13 19°**х** 28'31 19.05617 AU retrograde min. Earth dist. -3548 Jun 11 j 00:17 21°M23'34 18.84732 AU direct -3541 Sep 25 j 05:51 17° ₹ 30'00 min. Earth dist. opposition -3548 Jun 12 j 03:56 21°M20'48 0°-5'-6 -3540 Jan 08 j 09:58 21°**尽**22'02 0°-28'-10 direct -3548 Aug 27 j 06:47 19°M23'47 conjunction minimum elong -3540 Jan 08 j 09:58 21°**尽** 22'02 0°28'18 conjunction -3548 Dec 10 j 19:34 23°M 19'29 0°-6'-20 max. Earth dist. -3540 Jan 09 j 14:26 21°**х** 26'07 21.06109 AU -3548 Dec 10 j 19:35 23°M19'29 0°06'27 -3540 Apr 28 j 01:04 25° ₹ 24'04 minimum elong retrograde

min. Earth dist.

-3540 Jul 14 j 03:35 23° ₹27'27 19.06550 AU

-3548 Dec 10 j 13:24 23°ML18'37

behind sun begin

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3540 in astronomical counting style is the year 3541 BCE in historical counting style. -3540 Jul 15 i 06:03 23° ₹24'48 0°-32'-39 min. Earth dist. -3532 Aug 15 j 15:30 25°정15'23 18.98702 AU opposition direct -3540 Sep 28 j 12:45 21° ₹ 28'53 direct -3532 Oct 30 j 05:05 23°る16'42 -3539 Jan 11 j 15:34 25° ₹ 20'42 0°-30'-50 -3531 Feb 12 j 21:46 27°る10'16 0°-45'-51 conjunction conjunction -3539 Jan 11 j 15:34 25° ₹20'42 0°30'59 -3531 Feb 12 j 21:46 27°る10'16 0°45'59 minimum elong minimum elong -3539 Jan 12 j 18:41 25° ₹24'35 21.06775 AU -3531 Feb 13 j 17:39 27°중13'06 20.97373 AU max. Earth dist. max. Earth dist. -3539 May 02 j 09:05 29°**尽** 22'44 -3531 Apr 08 j 16:05 retrograde 0°≈ 1°≈14'05 -3539 Jul 19 j 13:32 27°**尽**23'20 -3531 Jun 04 j 05:28 opposition 0°-35'-30 retrograde -3539 Jul 18 j 12:48 27°**х** 25'49 -3531 Aug 01 j 11:19 min. Earth dist. 19.06968 AU 30°Ŗる -3539 Oct 02 j 17:29 25° ₹27'22 direct opposition -3531 Aug 20 j 17:11 29°る14'04 0°-51'-16 min. Earth dist. -3531 Aug 20 j 00:29 29°**궁**15'46 18.96005 AU -3538 Jan 15 j 21:17 29° ₹ 19'03 0°-33'-20 -3531 Nov 03 j 08:35 27°る17'12 conjunction direct -3538 Jan 15 j 21:17 29° **₹** 19'03 0°33'29 -3530 Jan 27 j 02:59 minimum elong 0°≈ max. Earth dist. -3538 Jan 17 j 00:28 29°**х** 22'56 21.06957 AU -3538 Jan 27 j 21:02 0°궁 conjunction -3530 Feb 17 j 06:38 1°≈11'25 0°-46'-50 retrograde -3538 May 06 j 17:45 3°る21'05 minimum elong -3530 Feb 17 j 06:38 1°≈11'25 0°46'58 opposition -3538 Jul 23 j 20:29 1°る21'35 0°-38'-11 max. Earth dist. -3530 Feb 18 j 01:22 1°≈14'05 20.94463 AU min. Earth dist. -3538 Jul 22 j 19:25 1°る24'07 19.06920 AU retrograde -3530 Jun 08 j 16:36 5°≈15'43 -3538 Aug 30 j 06:41 30°R ⊀ opposition -3530 Aug 24 j 23:39 3°≈15'39 0°-52'-14 direct -3538 Oct 06 j 23:36 29° ₹25'32 min. Earth dist. -3530 Aug 24 j 07:35 3°≈17'18 18.92861 AU -3538 Nov 12 j 18:57 direct -3530 Nov 07 j 15:23 1°≈18'36 conjunction -3537 Jan 20 i 03:08 3°る17'10 0°-35'-41 conjunction -3529 Feb 21 i 16:15 5°≈13'35 0°-47'-34 minimum elong -3537 Jan 20 i 03:08 3°る17'10 0°35'51 minimum elong -3529 Feb 21 i 16:15 5°≈13'35 0°47'41 max. Earth dist. -3537 Jan 21 i 05:03 3°る20'52 21.06695 AU max. Earth dist. -3529 Feb 22 j 08:35 5°≈15'55 20.91079 AU retrograde -3537 May 11 j 01:01 7°る19'17 retrograde -3529 Jun 13 j 01:42 9°≈18'24 -3537 Jul 27 j 03:59 5°る22'01 19.06467 AU opposition -3529 Aug 29 j 06:22 7°≈18'15 0°-52'-56 min. Earth dist. opposition -3537 Jul 28 j 03:19 5°る19'40 0°-40'-41 min. Earth dist. -3529 Aug 28 j 17:07 7°≈19'36 18.89236 AU -3537 Oct 11 j 04:08 3°る23'30 direct -3529 Nov 11 j 19:56 5°≈20'59 direct -3536 Jan 24 j 09:18 7°る15'13 0°-37'-51 -3528 Feb 26 j 02:38 9°**≈**16'47 0°-48'-5 conjunction conjunction -3536 Jan 24 j 09:18 -3528 Feb 26 j 02:38 minimum elong 7°る15'13 0°38'00 minimum elong 9°≈16'47 0°48'12 -3536 Jan 25 j 11:10 7°**궁**18'54 21.06054 AU -3528 Feb 26 j 17:14 max. Earth dist. max. Earth dist. 9°≈18'52 20.87218 AU -3536 May 14 j 10:29 11°る17'28 -3528 Jun 16 j 13:12 13°≈22'08 retrograde retrograde -3536 Jul 30 j 10:10 9°る20'07 19.05633 AU -3528 Sep 01 j 13:11 11°≈21'52 0°-53'-22 min. Earth dist. opposition -3528 Sep 01 j 00:52 11°≈23'08 18.85121 AU -3536 Jul 31 j 09:45 9°**ට**17'44 0°-42'-59 opposition min. Earth dist. 7°**る**21'27 -3536 Oct 14 j 09:48 -3528 Nov 15 j 03:10 9°≈24'20 direct direct -3527 Mar 01 j 13:32 13°≈21'01 0°-48'-20 conjunction -3535 Jan 27 j 15:44 11°**⋜**13'20 0°-39'-51 conjunction -3535 Jan 27 j 15:44 11°**♂**13'20 0°40'00 minimum elong minimum elong -3527 Mar 01 j 13:32 13°≈21'01 0°48'27 max. Earth dist. -3535 Jan 28 j 16:10 11°중16'49 21.05031 AU max. Earth dist. -3527 Mar 02 j 01:34 13°≈22'44 20.82859 AU retrograde -3535 May 18 j 17:18 15°る15'46 -3527 Mar 31 j 03:46 15°≈ -3535 Aug 04 j 16:05 13°♂15'58 0°-45'-5 retrograde -3527 Jun 20 j 22:52 17°≈26'55 opposition min. Earth dist. -3535 Aug 03 j 18:25 13°る18'09 19.04436 AU -3527 Sep 05 j 20:16 15°≈26'31 0°-53'-32 opposition direct -3535 Oct 18 j 13:43 11°**♂**19'35 min. Earth dist. -3527 Sep 05 j 10:47 15°≈27'30 18.80535 AU -3527 Sep 16 j 14:53 15°R≈ -3534 Jan 31 i 22:34 15°**⋜**11'43 0°-41'-39 -3527 Nov 19 i 09:05 13°≈28'41 conjunction direct -3534 Jan 31 j 22:34 15°る11'43 0°41'47 -3526 Jan 19 i 12:27 15°≈ minimum elong -3534 Feb 01 j 22:42 15°る15'10 21.03667 AU max. Earth dist. retrograde -3534 May 23 i 03:26 19° ₹ 14'25 -3526 Mar 06 i 01:05 17°≈26'19 0°-48'-21 conjunction minimum elong opposition -3534 Aug 08 i 22:17 17°る14'32 0°-46'-58 -3526 Mar 06 i 01:05 17°≈26'19 0°48'28 min. Earth dist. -3534 Aug 08 j 00:32 17°る16'44 19.02891 AU max. Earth dist. -3526 Mar 06 j 11:19 17°≈27'46 20.78079 AU direct -3534 Oct 22 j 19:27 15°る18'03 retrograde -3526 Jun 25 j 10:26 21°≈32'48 opposition -3526 Sep 10 j 03:26 19°≈32'14 0°-53'-25 -3533 Feb 05 j 05:37 19° ් 10'33 0°-43'-15 conjunction min. Earth dist. -3526 Sep 09 j 18:51 19°≈33'08 18.75553 AU -3533 Feb 05 j 05:37 19°る10'33 0°43'23 minimum elong direct -3526 Nov 23 j 16:54 17°≈34'04 -3533 Feb 06 j 04:12 19°る13'46 21.01943 AU max. Earth dist. retrograde -3533 May 27 j 10:43 23°**♂**13'35 -3525 Mar 10 j 13:11 21°≈32'42 0°-48'-7 conjunction -3525 Mar 10 j 13:11 21°≈32'42 0°48'14 -3533 Aug 12 j 09:04 21°る15'38 19.00985 AU min. Earth dist. minimum elong -3533 Aug 13 j 04:40 21°る13'38 0°-48'-38 -3525 Mar 10 j 21:09 21°≈33'50 20.72918 AU opposition max. Earth dist. -3533 Oct 26 j 22:48 19°**♂**17'02 -3525 Jun 29 j 20:48 25°≈39'48 direct retrograde opposition -3525 Sep 14 j 11:01 23°≈39'04 0°-53'-2 -3532 Feb 09 j 13:28 23°る10'01 0°-44'-40 conjunction min. Earth dist. -3525 Sep 14 j 05:10 23°≈39'41 18.70230 AU minimum elong -3532 Feb 09 j 13:27 23°る10'01 0°44'48 direct -3525 Nov 27 j 23:39 21°≈40'32 max. Earth dist. -3532 Feb 10 j 11:21 23°る13'08 20.99861 AU -3532 May 30 j 21:20 27°る13'24 -3524 Mar 14 j 02:09 25°≈40'15 0°-47'-39 retrograde conjunction

-3524 Mar 14 j 02:09 25°≈40'15 0°47'44

minimum elong

-3532 Aug 16 j 10:44 25°**♂**13'26 0°-50'-4

opposition

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3524 in astronomical counting style is the year 3525 BCE in historical counting style. -3524 Mar 14 j 08:10 25°≈41'07 20.67462 AU max. Earth dist. -3516 Apr 18 j 02:34 29° + 34'30 20.18625 AU max. Earth dist. -3524 Jul 03 j 09:12 29°≈47'59 -3516 Apr 25 j 07:16 $0^{\circ}\Upsilon$ retrograde -3524 Sep 17 j 18:35 27°≈47'06 0°-52'-23 -3516 Aug 07 j 05:35 3°Y50'04 opposition retrograde -3524 Sep 17 j 13:40 27°≈47'37 18.64642 AU -3516 Oct 21 j 02:18 1°Y48'26 0°-37'-22 min. Earth dist. opposition -3524 Dec 01 j 08:27 25°≈48'11 min. Earth dist. 1°**Υ**47'23 18.15369 AU -3516 Oct 21 j 12:05 direct -3516 Dec 12 j 06:35 30°**₹** -3523 Mar 18 j 15:44 29°≈49'04 0°-46'-55 29°\ 46'41 -3515 Jan 03 j 19:26 conjunction direct -3523 Mar 18 j 15:44 29°≈49'04 -3515 Jan 26 j 05:30 $0^{\circ}\Upsilon$ minimum elong 0°47'01 max. Earth dist. -3523 Mar 18 j 19:41 29°≈49'38 20.61756 AU -3523 Mar 21 j 19:28 0°**)**€ conjunction -3515 Apr 23 j 10:31 3°**Y**'59'00 0°-32'-19 -3515 Apr 23 j 10:31 retrograde -3523 Jul 07 j 20:17 3°**¥**57'28 minimum elong 3°**Υ**'59'00 0°32'20 -3515 Apr 22 j 21:31 3°Υ57'05 20.12089 AU opposition -3523 Sep 22 j 02:49 1°**¥**56′26 0°-51'-27 max. Earth dist. -3523 Sep 22 j 00:26 -3515 Aug 11 j 22:35 min. Earth dist. 1°**¥**56'41 18.58842 AU retrograde 8°**Y**13'40 -3523 Nov 25 j 05:01 30°R≈ opposition -3515 Oct 25 j 15:18 6°**Y**11'58 0°-34'-19 direct -3523 Dec 05 j 15:44 29°≈57'09 min. Earth dist. -3515 Oct 26 j 03:23 6°Υ10'40 18.08787 AU -3523 Dec 16 j 00:17 0°**)**€ direct -3514 Jan 08 j 08:56 4°Y09'51 conjunction -3522 Mar 23 j 05:53 3°**)** ★59'15 0°-45'-56 conjunction -3514 Apr 28 j 07:40 8°Y'23'42 0°-29'-28 minimum elong -3522 Mar 23 j 05:53 3°**¥**59'15 0°46'01 minimum elong -3514 Apr 28 j 07:40 8°**Y**23'42 0°29'27 max. Earth dist. -3522 Mar 23 j 07:54 3°**升**59'32 20.55886 AU max. Earth dist. -3514 Apr 27 j 15:23 8°**Y**21'17 20.05479 AU retrograde -3522 Jul 12 j 10:06 8°¥08'23 retrograde -3514 Aug 16 j 16:33 12°**Υ**39'09 opposition -3522 Sep 26 i 11:19 6°**)**€07'12 0°-50'-15 opposition -3514 Oct 30 i 04:55 10°**Y**37'19 0°-31'-3 min. Earth dist. -3522 Sep 26 i 09:47 6°**升**07'21 18.52898 AU min. Earth dist. direct -3522 Dec 10 j 01:26 4°**)**(07'32 direct -3513 Jan 13 i 00:57 8°**Ƴ**34'47 -3521 Mar 27 j 21:01 8° ¥ 10'57 0°-44'-43 -3513 May 03 j 05:55 12°**Υ**50'11 0°-26'-25 conjunction conjunction -3521 Mar 27 j 21:01 8°\dagger 10'57 0°44'47 minimum elong -3513 May 03 j 05:55 12°**Υ**50'11 0°26'25 minimum elong -3521 Mar 27 j 21:09 8°**升**10'58 20.49875 AU -3513 May 02 j 12:22 12°**Υ**47'34 19.98825 AU max. Earth dist. max. Earth dist. -3513 Aug 21 j 10:22 17°**Y**06′21 retrograde retrograde -3521 Sep 30 j 20:19 10° **X** 19'31 0°-48'-46 -3513 Nov 03 j 19:09 15°**Υ**04'26 0°-27'-34 opposition opposition -3521 Sep 30 j 21:18 10° **∺** 19'25 18.46838 AU -3513 Nov 04 j 10:51 15° Υ 02'44 17.95503 AU min. Earth dist. min. Earth dist. -3521 Dec 14 j 09:48 -3512 Jan 17 j 16:19 13°**Y**′01′28 8°**∺**19'29 direct direct -3512 May 06 j 07:59 17°**Υ**15'18 19.92208 AU max. Earth dist. -3520 Mar 31 j 13:02 12°**米**24'16 0°-43'-15 conjunction -3512 May 07 j 04:43 17°**Υ**18'24 0°-23'-11 -3520 Mar 31 j 13:02 12° ¥24'16 0°43'19 minimum elong conjunction -3512 May 07 j 04:43 17°**Y**18′24 -3520 Mar 31 j 10:52 12° **★**23'57 20.43783 AU max. Earth dist. minimum elong -3520 Jul 20 j 13:42 16°**)** 34'54 -3512 Aug 25 j 05:13 21°**Υ**35'18 retrograde retrograde opposition -3520 Oct 04 j 05:50 14° ★ 33'31 0°-47'-1 opposition -3512 Nov 07 j 10:10 19°**Y**33'14 0°-23'-53 min. Earth dist. -3520 Oct 04 j 07:48 14° + 33'19 18.40703 AU min. Earth dist. -3512 Nov 08 j 03:27 19°**Υ**31'22 17.88937 AU direct -3520 Dec 17 j 20:20 12° **∺** 33'09 direct -3511 Jan 21 j 10:15 17°**Y**29'51 max. Earth dist. -3511 May 11 j 06:48 21°**Y**45'05 19.85697 AU -3519 Apr 05 j 05:49 16° **¥** 39'22 0°-41'-32 conjunction -3519 Apr 05 j 05:49 16°**)** 39'22 0°41'35 -3511 May 12 j 04:08 21°**Y**48'18 0°-19'-47 minimum elong conjunction -3519 Apr 05 j 01:57 16°**)** 38'48 20.37604 AU -3511 May 12 j 04:08 21°**Υ**48'18 max. Earth dist. minimum elong -3519 Jul 25 j 04:03 20° **₭** 50'48 -3511 Aug 29 j 23:51 26°**Y**05'53 retrograde retrograde -3519 Oct 08 j 16:01 18° ¥49'21 0°-45'00 -3511 Nov 12 j 01:53 24° γ′03'43 0°-20'-3 opposition opposition -3519 Oct 08 j 20:26 18° \(\frac{1}{4}\) 48'53 18.34490 AU -3511 Nov 12 j 20:33 24° Υ 01'42 17.82509 AU min. Earth dist. min. Earth dist. -3519 Dec 22 j 06:10 16°**)** 48'39 -3510 Jan 26 j 03:38 21° Υ 59'56 direct direct max. Earth dist. -3510 May 16 j 03:59 26° Υ 16'12 19.79378 AU -3518 Apr 09 j 23:31 20° ¥ 56'20 0°-39'-35 conjunction -3518 Apr 09 j 23:31 20° **)** € 56'20 0°39'39 $-3510 \text{ May } 17 \text{ i } 04:06 \quad 26^{\circ} \Upsilon 19'51 \quad 0^{\circ} -16' -16$ minimum elong conjunction -3518 Apr 09 j 17:03 20° X 55'23 20.31372 AU $-3510 \text{ May } 17 \text{ i } 04:06 \quad 26^{\circ} \Upsilon 19'51 \quad 0^{\circ} 16'14$ max. Earth dist. minimum elong -3518 Jul 29 j 20:22 25° ¥ 08'36 -3510 Jul 27 j 23:11 0° 8 retrograde -3510 Sep 03 j 19:21 opposition -3518 Oct 13 j 02:41 23° ¥ 07'05 0°-42'-43 retrograde 0°**8**38'07 -3510 Oct 12 j 02:48 30°R℃ min. Earth dist. -3518 Oct 13 j 08:22 23° \(\) 06'29 18.28219 AU -3510 Nov 16 j 18:12 28° γ 35'50 0°-16'-4 direct -3518 Dec 26 j 18:00 21°₩06'03 opposition min. Earth dist. -3510 Nov 17 j 14:23 28°**Y**33'39 17.76324 AU -3509 Jan $30 \text{ j } 23:00 \ 26^{\circ} \Upsilon 31'38$ -3517 Apr 14 j 18:17 25° **★** 15'16 0°-37'-24 direct conjunction -3517 Apr 14 j 18:17 25° **¥** 15'16 0°37'25 -3509 May 07 j 13:22 0°8 minimum elong -3517 Apr 14 j 10:05 25° **米** 14'04 20.25047 AU -3509 May 21 j 04:30 0°**8**49'20 19.73323 AU max. Earth dist. max. Earth dist. -3517 Aug 03 j 12:18 29°**∺**28'20 retrograde opposition -3517 Oct 17 j 14:13 27° ¥26'47 0°-40'-10 conjunction -3509 May 22 j 04:53 0°**8**53'02 0°-12'-37 min. Earth dist. -3517 Oct 17 j 22:26 27° **★**25'55 18.21844 AU minimum elong -3509 May 22 j 04:52 0°**8**53'02 0°12'34 direct -3517 Dec 31 j 05:34 25°**¥**25'25 behind sun begin -3509 May 22 j 00:39 0°**8**52'25 behind sun end -3509 May 22 j 09:06 0°**8**53'40 -3516 Apr 18 j 13:55 29° **★** 36'10 0°-34'-58 -3509 Sep 08 j 15:16 5°**8**11'55 conjunction retrograde -3516 Apr 18 j 13:55 29° **★** 36'10 0°34'59 -3509 Nov 21 j 11:24 3°**8**09'35 0°-11'-57 minimum elong opposition

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Earth dist. 3°**Д**25'03 19.41921 AU -3508 Sep 12 j 11:21 -3502 Oct 11 j 03:35 retrograde 9°**8**47'21 retrograde 7°**I**52′03 opposition -3508 Nov 25 j 05:22 7°**8**44'58 0°-7'-44 opposition -3502 Dec 23 j 09:25 5°**Ⅱ**49'58 0°18'10 min. Earth dist. -3508 Nov 26 j 03:41 7°**8**42'32 17.64894 AU min. Earth dist. -3502 Dec 24 j 11:56 5°**Ⅲ**47'04 17.40473 AU 5°840'05 -3501 Mar 09 j 09:44 direct -3507 Feb 08 j 15:27 direct 3°**Ⅱ**43'55 -3507 May 30 j 05:07 10°800'12 19.62259 AU -3501 Jun 28 j 19:39 8°**Д**09'51 19.39039 AU max. Earth dist. max. Earth dist. conjunction -3507 May 31 j 07:43 10°**8**04'16 0°-5'-5 conjunction -3501 Jun 30 j 02:26 8°II14'40 0°18'12 minimum elong -3507 May 31 j 07:43 10°**8**04'16 0°05'01 minimum elong -3501 Jun 30 j 02:26 8°**Ⅱ**14'39 0°18'19 behind sun begin -3507 May 31 j 01:07 10°**8**03'17 retrograde -3501 Oct 16 j 04:34 12°**I**37'10 behind sun end -3507 May 31 j 14:18 10°**8**05'15 opposition -3501 Dec 28 j 08:38 10°**Ⅲ**35'08 retrograde -3507 Sep 17 j 09:01 14°824'21 min. Earth dist. -3501 Dec 29 j 10:27 10°**Д**32'19 17.37782 AU opposition -3507 Nov 30 j 00:03 12°**8**21'58 0°-3'-27 direct -3500 Mar 13 j 12:22 8°**Ⅲ**28'58 min. Earth dist. -3507 Nov 30 j 22:34 12°**8**19'30 17.59771 AU max. Earth dist. -3500 Jul 02 j 23:51 12°**Д**55'35 19.36539 AU direct -3506 Feb 13 j 13:12 10°816'50 max. Earth dist. -3506 Jun 04 j 05:29 14°**8**37'58 19.57352 AU conjunction -3500 Jul 04 i 06:15 13°**Ⅱ**00'21 0°21'51 minimum elong -3500 Jul 04 j 06:15 13°**耳**00'21 conjunction -3506 Jun 05 j 09:47 14°842'19 0°-1'-10 retrograde -3500 Oct 20 j 03:07 17°**Д**23'00 -3506 Jun 05 j 09:47 14°**8**42'19 0°01'06 -3499 Jan 01 j 08:36 15°**Ⅲ**20'59 0°26'17 minimum elong opposition -3506 Jun 05 j 03:00 14°**8**41'18 -3499 Jan 02 j 11:27 15° **II** 18'04 17.35497 AU behind sun begin min. Earth dist. -3506 Jun 05 j 16:34 14°**8**43'20 -3499 Mar 18 j 14:09 13°**Ⅲ**14'41 behind sun end direct -3506 Jun 10 j 04:56 15°**8** max. Earth dist. -3499 Jul 08 j 03:03 17°**II**41'44 19.34478 AU -3506 Sep 21 j 22:51 19°**8**02'58 asc. node -3499 Jul 09 j 09:55 17°**II**46'35 0°25'20 -3506 Sep 22 j 06:08 19°**8**02'58 conjunction retrograde -3506 Dec 04 j 19:37 17°**8**00'37 0°00'53 -3499 Jul 09 j 09:55 17°**Ⅱ**46'35 minimum elong 0°25'28 opposition -3499 Oct 25 j 03:41 22°**Д**09'19 -3506 Dec 05 j 19:34 16°858'00 17.55091 AU min. Earth dist. retrograde -3505 Feb 05 j 01:01 15°R₩ -3498 Jan 06 j 08:46 20°**Ⅲ**07'18 0°30'06 opposition -3505 Feb 18 j 10:46 14°855'14 -3498 Jan 07 j 10:34 20°**Д**04'30 17.33666 AU direct min. Earth dist. -3505 Mar 03 j 18:37 15°**႘** -3498 Mar 23 j 18:20 18°**Ⅲ**00'53 direct max. Earth dist. -3505 Jun 09 j 08:13 19°**8**17'38 19.52887 AU -3498 Jul 13 j 08:00 22°**Ⅲ**28'30 19.32880 AU max. Earth dist. conjunction -3505 Jun 10 j 12:31 19°**8**21'59 0°02'50 conjunction -3498 Jul 14 j 13:33 22°**Ⅲ**33'09 0°28'40 minimum elong -3505 Jun 10 j 12:31 19°**8**21'59 0°02'56 minimum elong -3498 Jul 14 j 13:33 22°**Ⅲ**33'09 behind sun begin -3505 Jun 10 j 05:46 19°**8**20'58 retrograde -3498 Oct 30 j 02:21 26°**Ц**55'51 -3505 Jun 10 j 19:16 19°**8**23'00 -3497 Jan 11 j 09:38 24°**I**I53'51 0°33'42 behind sun end opposition -3505 Sep 27 j 05:53 23°**8**43'08 min. Earth dist. -3497 Jan 12 j 11:55 24°**Д**51'00 17.32316 AU retrograde -3505 Dec 09 j 15:47 21°840'51 0°05'15 -3497 Mar 28 j 21:49 22°**Ⅱ**47'21 opposition direct -3505 Dec 10 j 15:42 21°838'14 17.50832 AU max. Earth dist. -3497 Jul 18 j 10:55 27°**Д**15'07 19.31797 AU min. Earth dist. -3504 Feb 23 i 10:19 19°\(\delta\)35'18 direct -3504 Jun 13 j 10:08 23°858'40 19.48833 AU -3497 Jul 19 i 16:43 27° **I** 19'49 0°31'47 max. Earth dist. conjunction -3497 Jul 19 i 16:43 27°**I**I19'49 0°31'56 minimum elong -3504 Jun 14 j 15:36 24°**8**03'13 0°06'44 conjunction -3497 Sep 02 i 23:38 0ಂಣ -3504 Jun 14 i 15:36 24°803'13 0°06'51 -3497 Nov 04 i 02:24 1°9542'26 minimum elong retrograde -3504 Jun 14 j 09:19 24°**8**02'16 -3496 Jan 08 i 21:56 30°R II behind sun begin -3504 Jun 14 j 21:53 24°**8**04'10 -3496 Jan 16 j 10:43 29°**II**40'26 0°37'04 behind sun end opposition -3504 Oct 01 j 03:59 28°824'49 min. Earth dist. -3496 Jan 17 j 11:35 29°**Д**37'44 17.31509 AU retrograde opposition -3504 Dec 13 j 13:01 26°822'37 0°09'36 direct -3496 Apr 02 j 02:43 27° **II** 33'51 -3496 Jun 19 j 02:52 min. Earth dist. -3504 Dec 14 j 14:25 26°819'50 17.46995 AU -3503 Feb 27 j 08:48 24°**8**16'53 direct conjunction -3496 Jul 23 j 19:40 2°**©**06'23 0°34'41 -3503 Jun 19 j 18:52 28°**8**45'52 0°10'37 -3496 Jul 23 j 19:40 2°906'23 0°34'49 conjunction minimum elong -3503 Jun 19 j 18:52 28°**8**45'52 0°10'44 -3496 Jul 22 j 16:06 2°502'02 19.31274 AU minimum elong max. Earth dist. -3503 Jun 19 j 13:44 28°**8**45'05 -3496 Nov 08 j 01:31 behind sun begin retrograde 6°9528'51 -3503 Jun 20 j 00:01 28°**8**46'38 -3495 Jan 20 j 12:19 behind sun end opposition 4°**ॐ**26'53 0°40'10 max. Earth dist. -3503 Jun 18 j 13:12 28°**8**41'15 19.45192 AU min. Earth dist. -3495 Jan 21 j 12:49 4°924'13 17.31287 AU -3503 Jul 09 j 21:49 Π °0 direct -3495 Apr 07 j 06:39 2°920'17 retrograde -3503 Oct 06 j 04:56 3°**Ⅲ**07'51 opposition -3503 Dec 18 j 10:51 1°**I**105'43 0°13'55 conjunction -3495 Jul 28 j 21:51 6°952'43 0°37'21 min. Earth dist. -3503 Dec 19 j 11:53 1°**Д**02'59 17.43544 AU -3495 Jul 28 j 21:51 6°952'43 minimum elong 0°37'28

max. Earth dist.

-3495 Jul 27 j 18:34

6°5548'24 19.31367 AU

-3502 Jan 13 j 20:34 30°R ₩

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Earth dist. retrograde -3494 Nov 18 j 00:48 16°500'40 conjunction -3486 Sep 09 j 17:07 19° Ω 22'35 0°48'11 opposition -3493 Jan 30 j 15:56 13°558'49 0°45'32 minimum elong -3486 Sep 09 j 17:07 19° Ω 22'35 0°48'15 min. Earth dist. -3493 Jan 31 j 13:39 13°556'29 17.32756 AU max. Earth dist. -3486 Sep 09 j 07:09 19°Ω21'01 19.57967 AU -3493 Apr 17 j 14:58 11°552'22 -3486 Dec 25 j 15:34 23°**Ω**40'35 direct retrograde -3485 Mar 10 j 08:45 $21^{\circ}\Omega$ 39'50 0° 53'29 max. Earth dist. -3493 Aug 07 j 01:21 16°520'28 19.33492 AU opposition min. Earth dist. -3485 Mar 10 j 16:14 21° **Ω**39'03 17.60416 AU conjunction -3493 Aug 08 j 01:16 16°524'15 0°41'52 direct -3485 May 26 j 17:09 19°**Ω**35'37 minimum elong -3493 Aug 08 j 01:15 16°524'15 0°41'59 retrograde -3493 Nov 23 j 00:45 20°545'55 conjunction -3485 Sep 14 j 12:55 24°Ω00'16 0°47'48 opposition -3492 Feb 04 j 18:06 18°544'11 0°47'44 minimum elong -3485 Sep 14 j 12:55 24° **Ω**00'16 0°47'53 min. Earth dist. -3492 Feb 05 j 14:09 18°542'02 17.34475 AU max. Earth dist. -3485 Sep 14 j 05:23 23° Ω59'06 19.62908 AU direct -3492 Apr 21 j 18:40 16°537'54 retrograde $-3485 \,\mathrm{Dec}\ 30\,\mathrm{i}\ 10:41\ 28^{\circ}\Omega 17'33$ max. Earth dist. -3492 Aug 11 j 05:02 21°506'00 19.35529 AU opposition $-3484 \text{ Mar } 14 \text{ j } 10:01 \quad 26^{\circ} \Omega 16'52 \quad 0^{\circ} 52'53$ min. Earth dist. $-3484 \text{ Mar } 14 \text{ i } 16:30 \quad 26^{\circ} \Omega 16'11 \quad 17.65495 \text{ AU}$ conjunction -3492 Aug 12 j 02:03 21°509'19 0°43'42 direct $-3484 \text{ May } 30 \text{ j } 18:06 \quad 24^{\circ} \Omega 12'57$ minimum elong -3492 Aug 12 i 02:02 21°509'19 0°43'50 retrograde -3492 Nov 27 j 00:29 25°530'38 conjunction $-3484 \text{ Sep } 18 \text{ i } 07:34 \quad 28^{\circ} \Omega 36'11 \quad 0^{\circ} 47'07$ -3491 Feb 08 j 20:24 23°\$29'04 0°49'37 $-3484 \text{ Sep } 18 \text{ j } 07:34 \quad 28^{\circ} \Omega 36'11 \quad 0^{\circ} 47'12$ opposition minimum elong -3491 Feb 09 j 14:43 23°527'06 17.36801 AU max. Earth dist. -3484 Sep 18 j 01:44 $28^{\circ}\Omega$ 35'17 19.68129 AU min. Earth dist. -3491 Apr 26 j 22:08 21°523'01 -3484 Oct 11 j 01:03 direct 0° m max. Earth dist. -3491 Aug 16 j 06:21 25°550'42 19.38151 AU -3483 Jan 03 j 07:12 2° m 52'42 retrograde -3483 Mar 19 j 10:31 0° m 52'03 0° 51'57 opposition -3491 Aug 17 j 02:16 25°\$53'50 0°45'15 -3483 Mar 19 j 13:52 0° Mp 51'42 17.70840 AU conjunction min. Earth dist. -3491 Aug 17 j 02:16 25°\$53'50 0°45'21 -3483 Apr 09 j 20:32 30°R**Ω** minimum elong -3491 Nov 09 j 02:11 0°**Ω** direct -3483 Jun 04 j 20:05 28°**Ω**48'26 -3491 Dec 02 j 00:07 $0^{\circ}\Omega$ 14'44 -3483 Jul 28 j 02:36 retrograde 0° m -3491 Dec 25 j 07:10 30°Rூ -3490 Feb 13 j 22:35 28°513'20 0°51'10 -3483 Sep 23 j 01:28 3° m 10'12 0°46'09 opposition conjunction 3° To 10'12 $0^{\circ}46'12$ -3483 Sep 23 j 01:28 min. Earth dist. -3490 Feb 14 j 15:37 28°511'30 17.39701 AU minimum elong direct -3490 May 02 j 01:02 26°507'33 max. Earth dist. -3483 Sep 22 j 22:35 3° 10 09'45 19.73608 AU -3490 Aug 12 j 02:50 0°**Ω** retrograde -3482 Jan 08 j 00:44 7° m 25'54 max. Earth dist. -3490 Aug 21 j 08:34 0°**Ω**34'55 19.41308 AU opposition -3482 Mar 24 j 10:27 5° m 25'18 0°50'41 min. Earth dist. -3482 Mar 24 j 12:42 5° m 25'04 17.76458 AU -3490 Aug 22 j 01:57 0°Ω37'40 0°46'28 -3482 Jun 09 j 18:59 3°m/22'00 conjunction direct -3490 Aug 22 j 01:57 0°**Ω**37'40 0°46'35 minimum elong -3490 Dec 06 j 23:44 4°**Ω**58'05 -3482 Sep 27 j 18:17 7° m/42'14 0°44'53 retrograde conjunction -3489 Feb 19 j 00:55 2°**Ω**56'52 0°52'21 -3482 Sep 27 j 18:17 7° m/42'14 0°44'57 opposition minimum elong 2°Ω55'16 17.43082 AU -3482 Sep 27 j 17:03 min. Earth dist. -3489 Feb 19 i 15:48 max. Earth dist. 7° Mp 42'03 19.79377 AU direct -3489 May 07 i 04:40 0°Ω51'23 retrograde -3481 Jan 12 j 20:18 11° m 57'07 max. Earth dist. -3489 Aug 26 i 08:57 5°**Ω**18'08 19.44914 AU opposition -3481 Mar 29 i 09:50 9° m 56'34 0°49'07 min. Earth dist. -3481 Mar 29 i 08:42 9° m 56'41 17.82368 AU -3489 Aug 27 j 00:49 5°Ω20'39 0°47'23 direct -3481 Jun 14 j 18:33 7° m 53'35 conjunction -3489 Aug 27 j 00:49 5°Ω20'39 0°47'30 minimum elong -3489 Dec 11 j 22:20 9°Ω40'33 -3481 Oct 02 j 10:11 12° mp 12'16 0°43'22 retrograde conjunction -3488 Feb 24 j 03:20 7°**Ω**39'28 0°53'11 -3481 Oct 02 j 10:11 12° mp 12'16 0°43'24 opposition minimum elong min. Earth dist. -3488 Feb 24 j 17:07 7°**Ω**38'00 17.46904 AU max. Earth dist. -3481 Oct 02 j 12:23 12° m 12'36 19.85430 AU -3488 May 11 j 07:18 direct 5°**Ω**34'18 retrograde -3480 Jan 17 j 13:16 16° m 26'20 opposition -3480 Apr 02 j 08:45 14° M 25'51 0°47'16 conjunction -3488 Aug 30 j 23:05 $10^{\circ}\Omega$ 02'35 $0^{\circ}47'58$ min. Earth dist. -3480 Apr 02 j 06:07 14° Mp 26'07 17.88567 AU -3488 Aug 30 j 23:05 10°**Ω**02'35 0°48'04 direct -3480 Jun 18 j 15:52 12° M 23'15 minimum elong -3488 Aug 30 j 09:25 10° **Ω**00′26 19.48935 AU max. Earth dist. -3488 Dec 15 j 21:16 $14^{\circ}\Omega$ 21'55 -3480 Oct 06 j 01:11 16° mp 40'21 0°41'36 retrograde conjunction opposition $-3487 \text{ Feb } 28 \text{ j } 05:23 \quad 12^{\circ} \Omega 20'58 \quad 0^{\circ}53'38$ minimum elong -3480 Oct 06 j 01:11 16° Mp 40'21 0°41'38 min. Earth dist. $-3487 \text{ Feb } 28 \text{ j } 16:36 \quad 12^{\circ} \Omega 19'46 \quad 17.51096 \text{ AU}$ max. Earth dist. -3480 Oct 06 j 04:55 16° mp 40'55 19.91776 AU direct -3487 May 16 j 11:13 10°Ω16'07 retrograde -3479 Jan 21 j 07:37 20° m 53'37 opposition -3479 Apr 07 j 06:41 18° m 53'13 0°45'09 conjunction $-3487 \text{ Sep } 04 \text{ j } 20:30 \quad 14^{\circ} \Omega 43'17 \quad 0^{\circ} 48'14$ min. Earth dist. -3479 Apr 07 j 00:49 18° m 53'49 17.95044 AU -3487 Sep 04 j 20:30 14° **Ω**43'17 0°48'20 -3479 Jun 23 j 12:59 16° M 51'01 minimum elong direct

max. Earth dist.

-3487 Sep 04 j 08:45 14° Ω41'27 19.53295 AU

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3479 in astronomical counting style is the year 3480 BCE in historical counting style. -3479 Oct 10 j 15:28 21° m 06'33 0°39'36 max. Earth dist. -3471 Nov 14 i 04:23 25°**△**37'32 20.51605 AU conjunction -3479 Oct 10 j 15:28 21° m 06'33 0°39'37 -3470 Mar 01 j 20:00 29°**£**41'04 minimum elong retrograde -3479 Oct 10 j 22:35 21° m 07'39 19.98366 AU -3470 May 17 j 09:57 27° **2**43'43 18.54554 AU max. Earth dist. min. Earth dist. -3478 Jan 26 j 00:00 25° m 19'01 -3470 May 18 j 06:59 27°**2**41'36 0°17'02 retrograde opposition -3478 Apr 12 j 04:11 23° m 18'45 0°42'47 -3470 Aug 03 j 00:01 25°**△**43'04 opposition direct min. Earth dist. -3478 Apr 11 j 20:47 23° Mp 19'30 18.01728 AU -3470 Nov 17 j 15:15 29°**•**45'17 0°13'45 -3478 Jun 28 j 09:10 21° Mp 17'00 direct conjunction -3470 Nov 17 j 15:15 29°**♀**45'17 minimum elong 0°13'42 -3470 Nov 17 j 11:35 29°**£**44'45 conjunction -3478 Oct 15 j 04:43 25° m 30'58 0°37'22 behind sun begin -3470 Nov 17 j 18:54 29°**2**45'48 minimum elong -3478 Oct 15 j 04:43 25° Mp 30'58 0°37'23 behind sun end max. Earth dist. -3478 Oct 15 j 13:06 25° m 32'14 20.05141 AU max. Earth dist. -3470 Nov 18 j 12:37 29°**•**48'27 20.57436 AU -3470 Nov 21 j 18:21 retrograde -3477 Jan 30 j 17:16 29° m 42'40 0° M opposition -3477 Apr 17 j 00:58 27° m/42'31 0°40'11 retrograde -3469 Mar 06 j 08:05 3°M51'19 min. Earth dist. -3477 Apr 16 j 14:42 27° Mp 43'34 18.08570 AU opposition -3469 May 22 j 22:04 1°M51'50 0°13'18 direct -3477 Jul 03 j 04:17 25° Mp 41'13 min. Earth dist. -3469 May 22 j 00:05 1°M54'02 18.60278 AU -3469 Jul 22 j 11:48 30°**₹**Ω conjunction -3477 Oct 19 j 17:26 29° m 53'38 0°34'56 direct -3469 Aug 07 j 12:19 29°**♀**53'34 minimum elong -3477 Oct 19 j 17:27 29° m 53'38 0°34'58 -3469 Aug 23 j 07:31 max. Earth dist. -3477 Oct 20 j 05:06 29° m 55'25 20.12029 AU -3477 Oct 21 j 11:07 0∘**ত** conjunction -3469 Nov 21 j 22:50 3°M54'29 0°10'22 retrograde -3476 Feb 04 j 08:38 4°**£**04'34 minimum elong -3469 Nov 21 j 22:50 3°M54'29 0°10'18 opposition -3476 Apr 20 j 21:10 2°**2**04'34 0°37'21 behind sun begin -3469 Nov 21 i 17:37 3°M53'44 min. Earth dist. -3476 Apr 20 i 09:25 2°**2**05'46 18.15484 AU behind sun end -3469 Nov 22 i 04:04 3°M55'14 direct -3476 Jul 06 j 23:30 0°**ჲ**03'44 max. Earth dist. -3469 Nov 22 i 22:35 3°M58'00 20.63045 AU retrograde -3468 Mar 09 i 18:26 7°**ጤ**59'54 -3476 Oct 23 j 05:14 4°**2**14'36 0°32'20 -3468 May 26 j 12:09 6°ML00'25 0°09'31 conjunction opposition -3476 Oct 23 j 05:15 4°**2**14'36 0°32'19 min. Earth dist. -3468 May 25 j 12:33 6°ML02'47 18.65782 AU minimum elong -3476 Oct 23 j 17:48 4°**£**16'31 20.18955 AU -3468 Aug 11 j 01:21 4°ML02'25 max. Earth dist. direct -3475 Feb 08 j 00:48 retrograde 8°<u>₽</u>24'48 -3475 Apr 25 j 16:36 6°**2**24'56 0°34'20 -3468 Nov 25 j 05:44 8°M02'06 0°06'58 opposition conjunction -3468 Nov 25 j 05:43 0°06'54 min. Earth dist. -3475 Apr 25 j 02:36 6°**2**26'22 18.22403 AU minimum elong 8°M02'06 -3475 Jul 11 j 16:44 4°**₽**24'33 -3468 Nov 24 j 23:38 behind sun begin 8°M01'14 direct -3468 Nov 25 j 11:48 behind sun end 8°M02'59 -3475 Oct 27 j 16:35 8°**△**33'54 0°29'32 -3468 Nov 26 j 05:47 8°M05'39 20.68445 AU conjunction max. Earth dist. -3475 Oct 27 j 16:35 -3467 Mar 14 j 04:50 12° M 06'57 minimum elong 8°**♀**33'54 0°29'31 retrograde -3475 Oct 28 j 08:00 -3467 May 30 j 01:20 10° ML09'55 18.71096 AU max. Earth dist. 8°**♀**36'14 20.25832 AU min. Earth dist. -3474 Feb 12 j 14:56 12°**△**43'21 -3467 May 31 j 01:36 10°ML07'29 retrograde opposition 0°05'44 opposition -3474 Apr 30 j 11:16 10°**Ω**43'38 0°31'08 direct -3467 Aug 15 j 11:24 8°ML09'44 min. Earth dist. -3474 Apr 29 j 19:55 10°**£**45'11 18.29225 AU direct -3474 Jul 16 j 10:41 8°**≏**43'41 conjunction -3467 Nov 29 j 12:18 12°ML08'18 0°03'33 minimum elong -3467 Nov 29 j 12:18 12°ML08'18 0°03'28 -3474 Nov 01 j 03:10 12°**£**51'33 0°26'36 behind sun begin -3467 Nov 29 j 05:48 12°Ml07'22 conjunction -3474 Nov 01 j 03:10 12°**£**51'33 0°26'34 behind sun end -3467 Nov 29 j 18:47 12°ML09'13 minimum elong -3474 Nov 01 j 19:06 12°**⊆**53'57 20.32592 AU max. Earth dist. -3467 Nov 30 j 14:33 12°ML12'09 20.73651 AU max. Earth dist. -3473 Feb 17 j 06:00 17°**೨**00'18 -3466 Jan 22 j 11:28 15° M⋅ retrograde -3473 May 05 j 05:25 15° **2**00'40 0°27'47 opposition retrograde -3466 Mar 18 j 14:54 16° ML 12'37 -3466 May 15 j 13:55 15°RM min. Earth dist. -3473 May 04 i 12:20 15° **2**02'23 18.35911 AU -3473 Jul 21 j 02:20 13°**♀**01'07 direct opposition -3466 Jun 04 i 14:12 14°ML13'11 0°01'55 min. Earth dist. -3466 Jun 03 j 12:17 14° ML15'46 18.76197 AU -3473 Nov 05 i 13:10 17° **2**07'31 0°23'32 direct -3466 Aug 19 j 22:51 12° M 15'42 conjunction -3473 Nov 05 j 13:10 17°**£**07'31 0°23'30 -3466 Nov 12 j 15:06 15°M minimum elong -3473 Nov 06 j 07:40 17° **2**10'18 20.39171 AU max. Earth dist. -3472 Feb 21 j 18:58 21° **2**15'34 -3466 Dec 03 j 18:22 16°ML13'13 0°00'03 retrograde conjunction opposition -3472 May 08 j 22:47 19°**£**16'01 0°24'18 minimum elong -3466 Dec 03 j 18:23 16°ML13'13 0°00'02 min. Earth dist. -3472 May 08 j 04:20 19°**£**17'53 18.42374 AU behind sun begin -3466 Dec 03 j 12:54 16°M 12'26 direct -3472 Jul 24 j 19:03 17°**2**16'51 behind sun end -3466 Dec 03 j 23:52 16°ML13'59 max. Earth dist. -3466 Dec 04 j 20:49 16°ML17'05 20.78649 AU -3472 Nov 08 j 22:31 21°**£**21'49 0°20'21 -3466 Dec 09 j 19:28 16°M34'26 conjunction desc. node -3472 Nov 08 j 22:31 21°**△**21'49 -3465 Mar 23 j 00:18 20° 11.17'05 minimum elong 0°20'19 retrograde -3472 Nov 09 j 17:15 21°**Ω**24'37 20.45515 AU -3465 Jun 08 j 00:07 18°M20'18 18.81095 AU max. Earth dist. min. Earth dist. retrograde -3471 Feb 25 j 08:42 25°**£**29'10 opposition -3465 Jun 09 j 02:21 18°M 17'41 0°-1'-51 opposition -3471 May 13 j 15:14 23°**2**29'40 0°20'43 direct -3465 Aug 24 j 06:56 16°M20'28 min. Earth dist. -3471 May 12 j 19:39 23°**△**31'38 18.48600 AU direct -3471 Jul 29 j 08:59 21°**△**30'49 conjunction -3465 Dec 08 j 00:17 20°ML17'01 0°-3'-25 minimum elong -3465 Dec 08 j 00:16 20°M 17'01 0°03'32 -3471 Nov 13 j 07:22 25°**2**34'24 0°17'05 behind sun begin -3465 Dec 07 j 17:47 20°M16'05 conjunction -3471 Nov 13 j 07:22 25°**2**34'24 0°17'02 behind sun end -3465 Dec 08 j 06:46 20°M17'56 minimum elong

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3465 in astronomical counting style is the year 3466 BCE in historical counting style. -3465 Dec 09 i 04:37 20°ML21'09 20.83420 AU max. Earth dist. min. Earth dist. -3457 Jul 11 i 05:38 20° ₹27'28 19.06565 AU -3464 Mar 26 j 10:19 24° 11.20'28 -3457 Jul 12 j 07:42 20° **₹**'24'51 0°-29'-58 retrograde opposition min. Earth dist. -3464 Jun 11 j 10:06 22° ML 23'54 18.85725 AU -3457 Sep 25 j 16:23 18° ₹28'55 direct -3464 Jun 12 j 13:45 22°M21'08 0°-5'-37 opposition direct -3464 Aug 27 j 16:50 20°M24'12 -3456 Jan 08 j 19:36 22° ₹20'43 0°-28'-27 conjunction -3456 Jan 08 j 19:36 22° ₹20'43 0°28'36 minimum elong -3464 Dec 11 j 05:53 24° ML 19'51 0°-6'-48 -3456 Jan 09 j 23:59 22°**又** 24'47 21.07040 AU conjunction max. Earth dist. -3464 Dec 11 j 05:52 24°ML19'51 -3456 Apr 28 j 09:43 26°**尽**22'28 minimum elong 0°06'55 retrograde -3464 Dec 10 j 23:47 24°M18'59 -3456 Jul 15 j 15:16 24°**尽**23'09 behind sun begin opposition 0°-32'-57 -3456 Jul 14 j 12:53 24° ₹25'48 19.07472 AU behind sun end -3464 Dec 11 j 11:58 24°M20'43 min. Earth dist. max. Earth dist. -3464 Dec 12 j 10:01 24°M23'56 20.87900 AU direct -3456 Sep 28 j 23:24 22° ₹27'11 retrograde -3463 Mar 30 j 19:11 28°M22'56 -3455 Jan 12 j 00:59 26° ₹ 18'46 0°-31'-5 min. Earth dist. -3463 Jun 15 j 21:10 26°M26'24 18.90056 AU conjunction -3455 Jan 12 j 00:59 26° **₹**18'46 0°31'14 opposition -3463 Jun 17 j 00:33 26°M23'40 0°-9'-21 minimum elong direct -3463 Aug 31 j 23:55 24°M26'59 max. Earth dist. -3455 Jan 13 j 04:03 26°**✗**'22'37 21.07703 AU -3455 Apr 03 j 10:59 0°궁 conjunction -3463 Dec 15 j 11:26 28°M21'51 0°-10'-8 retrograde -3455 May 02 j 16:33 0°る20'30 minimum elong -3463 Dec 15 j 11:26 28°M21'51 0°10'14 -3455 Jun 01 j 09:24 30°R **✓** behind sun begin -3463 Dec 15 j 06:11 28°M21'06 opposition -3455 Jul 19 j 22:29 28° ₹21'05 0°-35'-46 behind sun end -3463 Dec 15 j 16:41 28° M22'35 min. Earth dist. -3455 Jul 18 j 21:44 28° ₹23'34 19.07915 AU max. Earth dist. -3463 Dec 16 j 17:00 28°M26'08 20.92054 AU direct -3455 Oct 03 j 03:12 26° ₹25'03 -3462 Jan 13 i 11:19 0°×7 -3454 Jan 11 i 10:52 retrograde -3462 Apr 04 i 04:58 2°**×**24'37 min. Earth dist. -3462 Jun 20 i 06:22 0°**∡**728'16 18.94017 AU conjunction -3454 Jan 16 i 06:36 0°**ට**16'31 0°-33'-34 opposition -3462 Jun 21 j 10:50 0°**х** 25′25 0°-13'-1 minimum elong -3454 Jan 16 i 06:36 0°33'43 -3462 Jul 02 j 03:27 30°RML max. Earth dist. -3454 Jan 17 j 10:00 0°る20'26 21.07934 AU direct -3462 Sep 05 j 08:15 28°M28'58 retrograde -3454 May 07 j 01:36 4°₹18'17 -3462 Nov 05 j 12:06 -3454 Jul 23 j 04:13 2°る21'19 19.07937 AU 0°×7 min. Earth dist. -3454 Jul 24 j 05:21 2°**る**18'47 0°-38'-25 opposition 2°**尽**23'07 0°-13'-24 -3454 Oct 07 j 09:38 -3462 Dec 19 j 16:38 0°る22'42 conjunction direct -3462 Dec 19 j 16:38 minimum elong 2°×23'07 0°13'33 2°**х** 22'35 -3462 Dec 19 j 12:54 -3453 Jan 20 j 12:11 4°る14'09 0°-35'-53 behind sun begin conjunction -3462 Dec 19 j 20:21 -3453 Jan 20 j 12:10 behind sun end 2°**∡**¹23'38 minimum elong 4°る14'09 0°36'01 -3462 Dec 20 j 21:39 -3453 Jan 21 j 14:13 2°**₹**27'19 20.95812 AU max. Earth dist. 4°る17'52 21.07754 AU max. Earth dist. -3461 Apr 08 j 13:44 6°**∡¹**25'38 -3453 May 11 j 09:04 8°**ප**16'03 retrograde retrograde -3461 Jun 25 j 20:51 4°**х** 26'29 0°-16'-37 -3453 Jul 28 j 12:09 6°る16'27 0°-40'-53 opposition opposition -3461 Jun 24 j 17:07 4°**尽**29'15 18.97568 AU -3453 Jul 27 j 12:41 6°정18'49 19.07571 AU min. Earth dist. min. Earth dist. direct -3461 Sep 09 j 14:49 2°**∡**′30′13 direct -3453 Oct 11 j 12:58 4°る20'18 conjunction -3461 Dec 23 j 22:07 6°**х** 23'45 0°-16'-37 conjunction -3452 Jan 24 j 18:19 8°311'51 0°-38'-1 minimum elong -3461 Dec 23 j 22:07 6°**х** 23'45 0°16'44 minimum elong -3452 Jan 24 j 18:18 8°**ට**11'51 0°38'10 max. Earth dist. -3461 Dec 25 j 04:03 6°**х** 28′04 20.99126 AU max. Earth dist. -3452 Jan 25 j 20:26 8°る15'34 21.07201 AU retrograde -3460 Apr 11 j 23:21 10°**≯**26′02 retrograde -3452 May 14 j 18:01 12°**⋜**13'54 min. Earth dist. -3460 Jun 28 j 01:41 8°**х** 29'45 19.00633 AU -3452 Jul 31 j 18:24 10°る14'15 0°-43'-9 opposition -3460 Jun 29 j 06:04 8°**∡**126'55 0°-20'-8 min. Earth dist. -3452 Jul 30 j 18:45 10°중16'39 19.06825 AU opposition -3460 Sep 12 i 22:19 6°**х** 30'49 -3452 Oct 14 j 18:46 8°る18'03 direct direct -3460 Dec 27 i 03:27 10° ₹23'48 0°-19'-45 -3451 Jan 28 i 00:35 12°る09'48 0°-39'-59 conjunction conjunction -3460 Dec 27 i 03:27 10° ₹23'48 0°19'53 -3451 Jan 28 j 00:35 12°る09'48 0°40'07 minimum elong minimum elong max. Earth dist. -3460 Dec 28 i 08:15 10° ₹27'56 21.01925 AU max. Earth dist. -3451 Jan 29 i 01:03 12°₹13'17 21.06268 AU retrograde -3459 Apr 16 i 07:37 14° ₹ 25'54 retrograde -3451 May 19 j 02:24 16°る12'06 min. Earth dist. -3459 Jul 02 j 11:59 12° ₹29'29 19.03169 AU min. Earth dist. -3451 Aug 04 j 03:05 14°る14'36 19.05709 AU -3459 Jul 03 j 15:06 12° ₹ 26'47 0°-23'-32 opposition -3451 Aug 05 j 00:51 14°る12'23 0°-45'-13 opposition -3459 Sep 17 j 04:08 10° ₹30'47 -3451 Oct 18 j 22:03 12°♂16'07 direct direct conjunction -3459 Dec 31 j 08:50 14° \checkmark 23'18 0° -22'-46 conjunction -3450 Feb 01 j 07:13 16°る08'10 0°-41'-46 minimum elong -3459 Dec 31 j 08:50 14° ₹23'18 0°22'55 minimum elong -3450 Feb 01 j 07:13 16°**⋜**08'10 0°41'54 -3458 Jan 01 j 14:07 14° ₹27'30 21.04179 AU max. Earth dist. -3450 Feb 02 j 07:33 16°る11'37 21.04967 AU max. Earth dist. retrograde -3458 Apr 20 j 16:59 18°**尽** 25'14 retrograde -3450 May 23 j 11:40 20°**궁**10'46 -3458 Jul 07 j 23:33 16°**尽** 26'05 0°-26'-49 min. Earth dist. -3450 Aug 08 j 09:18 18°정13'14 19.04208 AU opposition -3458 Jul 06 j 19:58 16° ₹28'51 19.05137 AU -3450 Aug 09 j 07:06 18°정11'01 0°-47'-4 min. Earth dist. opposition direct -3458 Sep 21 j 11:32 14° ₹30'08 direct -3450 Oct 23 j 03:28 16°る14'41 conjunction -3457 Jan 04 j 14:08 18° ₹ 22'15 0°-25'-41 conjunction -3449 Feb 05 j 14:21 20°る07'07 0°-43'-21 minimum elong -3457 Jan 04 j 14:08 18° ₹22'15 0°25'49 minimum elong -3449 Feb 05 j 14:21 20°る07'07 0°43'29 max. Earth dist. -3457 Jan 05 j 18:08 18° **₹** 26'16 21.05872 AU max. Earth dist. -3449 Feb 06 j 12:48 20°る10'19 21.03270 AU

retrograde

-3449 May 27 j 20:24 24°る10'05

retrograde

-3457 Apr 25 j 00:26 22° ₹24'05

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, page 31 Attention, astronomical year style is used: The year -3449 in astronomical counting style is the year 3450 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -3449	in astronomical cou	inting style is the year	3450 BCE in historical	counting style	
opposition	-3449 Aug 13 j 13:25	22° る 10'18	0°-48'-43	minimum elong	-3441 Mar 10 j 21:24	22° ≈ 29'28	0°48'03
min. Earth dist.	-3449 Aug 12 j 17:52		19.02309 AU	max. Earth dist.	-3441 Mar 11 j 05:16	22° ≈ 30'36	20.73184 AU
direct	-3449 Oct 27 j 07:20	20°る13'52		retrograde	-3441 Jun 30 j 04:29		
				opposition	-3441 Sep 14 j 19:36		
conjunction	-3448 Feb 09 j 22:12			min. Earth dist.	-3441 Sep 14 j 13:51		18.70472 AU
minimum elong	-3448 Feb 09 j 22:12			direct	-3441 Nov 28 j 08:15	22° ≈ 37'06	
max. Earth dist.	-3448 Feb 10 j 20:01		21.01164 AU				
retrograde	-3448 May 31 j 06:34		00.501.7	conjunction	-3440 Mar 14 j 10:15		
opposition	-3448 Aug 16 j 19:39			minimum elong	-3440 Mar 14 j 10:15		
min. Earth dist.	-3448 Aug 16 j 00:32 -3448 Oct 30 j 12:49		18.999 / U AU	max. Earth dist.	-3440 Mar 14 j 16:30	26°≈37'35 0° ∺	20.6/688 AU
direct	-3446 Oct 30 j 12.49	24 01347		retrograde	-3440 May 22 j 01:07 -3440 Jul 03 j 17:27	0°) 44'19	
conjunction	-3447 Feb 13 j 06:27	28°云07'19	0°-45'-53	renograde	-3440 Aug 15 j 22:52		
minimum elong	-3447 Feb 13 j 06:27			opposition	-3440 Sep 18 j 03:15		0°-52'-8
max. Earth dist.	-3447 Feb 14 j 01:59		20.98586 AU	min. Earth dist.	-3440 Sep 17 j 22:13		18.64862 AU
	-3447 Mar 19 j 11:14	0° ≈		direct	-3440 Dec 01 j 17:14		
retrograde	-3447 Jun 04 j 15:07	2°≈11'07			-3439 Mar 05 j 21:25	0°)	
min. Earth dist.	-3447 Aug 20 j 09:37	0°≈12'57	18.97154 AU		v		
opposition	-3447 Aug 21 j 02:06	0° ≈ 11'16	0°-51'-17	conjunction	-3439 Mar 18 j 23:36	0°) 45′09	0°-46'-41
	-3447 Aug 25 j 16:37	30°Ŗ₹		minimum elong	-3439 Mar 18 j 23:36	0°) 45′09	0°46'46
direct	-3447 Nov 03 j 17:25	28° る 14'32		max. Earth dist.	-3439 Mar 19 j 03:38	0°) 45'44	20.61974 AU
	-3446 Jan 09 j 00:21	0° ≈		retrograde	-3439 Jul 08 j 04:21	4°) 53′29	
				opposition	-3439 Sep 22 j 11:27	2°) 52′24	0°-51'-11
conjunction	-3446 Feb 17 j 15:30	2° ≈ 08'44		min. Earth dist.	-3439 Sep 22 j 08:57		18.59067 AU
minimum elong	-3446 Feb 17 j 15:30	2° ≈ 08'44		direct	-3439 Dec 06 j 00:17	0° ¥ 53′05	
max. Earth dist.	-3446 Feb 18 j 09:54		20.95530 AU				
retrograde	-3446 Jun 09 j 02:08	6°≈13'00		conjunction	-3438 Mar 23 j 13:52		0°-45'-41
opposition	-3446 Aug 25 j 08:35	4°≈13'03		minimum elong	-3438 Mar 23 j 13:52	4°) ₹55'04	
min. Earth dist.	-3446 Aug 24 j 16:48		18.93837 AU	max. Earth dist.	-3438 Mar 23 j 16:10		20.56119 AU
direct	-3446 Nov 07 j 23:48	2°≈16′07		retrograde	-3438 Jul 12 j 18:20	9°) €04'08	00 401 57
	2445 E-L 22 : 01.00	(00.01.110.2	00 471 22	opposition	-3438 Sep 26 j 19:52		0°-49'-57
conjunction minimum elong	-3445 Feb 22 j 01:00 -3445 Feb 22 j 01:00	6°≈11'02 6°≈11'02	0°-47'-32	min. Earth dist. direct	-3438 Sep 26 j 18:06 -3438 Dec 10 j 09:56		18.53144 AU
max. Earth dist.	-3445 Feb 22 j 16:47		20.91955 AU	direct	-3438 Dec 10 J 09.30	3 /(0313	
retrograde	-3445 Jun 13 j 10:45	0 ≈1317 10°≈15'48	20.91933 AU	conjunction	-3437 Mar 28 j 04:58	0°¥06'33	0°-44'-26
opposition	-3445 Aug 29 j 15:24	8°≈15'44	0°-52'-52	minimum elong	-3437 Mar 28 j 04:58		
min. Earth dist.	-3445 Aug 29 j 02:27		18.90005 AU	max. Earth dist.	-3437 Mar 28 j 05:07		20.50132 AU
direct	-3445 Nov 12 j 04:44	6°≈18'32		retrograde	-3437 Jul 17 j 06:48		
	,			opposition	-3437 Oct 01 j 05:01		0°-48'-27
conjunction	-3444 Feb 26 j 11:20	10° ≈ 14'14	0°-48'00	min. Earth dist.	-3437 Oct 01 j 05:50		
minimum elong	-3444 Feb 26 j 11:20	10° ≈ 14'14	0°48'07	direct	-3437 Dec 14 j 18:10	9°) 15′06	
max. Earth dist.	-3444 Feb 27 j 01:38	10° ≈ 16′17	20.87885 AU				
retrograde	-3444 Jun 16 j 22:12	14° ≈ 19'31		conjunction	-3436 Mar 31 j 20:59	13° ¥ 19'48	0°-42'-57
opposition	-3444 Sep 01 j 22:02	12° ≈ 19′17	0°-53'-16	minimum elong	-3436 Mar 31 j 20:59	13°) 19'48	0°43'00
min. Earth dist.	-3444 Sep 01 j 09:59	12° ≈ 20′32	18.85688 AU	max. Earth dist.	-3436 Mar 31 j 19:03	13° ¥ 19'31	20.44044 AU
direct	-3444 Nov 15 j 12:28	10° ≈ 21'47		retrograde	-3436 Jul 20 j 22:08		
				opposition	-3436 Oct 04 j 14:27		
conjunction	-3443 Mar 01 j 22:04		0°-48'-14	min. Earth dist.	-3436 Oct 04 j 16:13		18.40953 AU
minimum elong	-3443 Mar 01 j 22:04		0°48'21	direct	-3436 Dec 18 j 05:07	13° 大 28'45	
max. Earth dist.	-3443 Mar 02 j 09:46		20.83348 AU		2425 4 05:12.52	170 1/2 4/55	00 411 12
	-3443 Mar 14 j 02:08			conjunction	-3435 Apr 05 j 13:52		
retrograde opposition	-3443 Jun 21 j 06:53		09 521 22	minimum elong max. Earth dist.	-3435 Apr 05 j 13:52 -3435 Apr 05 j 09:54		0°41'16
min. Earth dist.	-3443 Sep 06 j 05:06 -3443 Sep 05 j 19:50		0°-53'-23 18.80948 AU		-3435 Apr 03 j 09.54 -3435 Jul 25 j 11:58		20.37839 AU
min, Darui dist.	-3443 Oct 13 j 17:45		10.00740 AU	retrograde opposition	-3435 Jul 25 j 11:38 -3435 Oct 09 j 00:44		0°-44'-37
direct	-3443 Nov 19 j 17:39	13 n∞ 14°≈25'55		min. Earth dist.	-3435 Oct 09 j 05:11		
ancet	-3443 Dec 26 j 03:41			direct	-3435 Dec 22 j 14:37		10.54072710
	2 200 20 j 00.41				2 200 22 j 1 1.37	, , , , , , 21	
conjunction	-3442 Mar 06 j 09:20	18° ≈ 23'24	0°-48'-13	conjunction	-3434 Apr 10 j 07:35	21° ¥ 52'01	0°-39'-14
minimum elong	-3442 Mar 06 j 09:20	18°≈23'24	0°48'20	minimum elong	-3434 Apr 10 j 07:35		0°39'15
max. Earth dist.	-3442 Mar 06 j 19:38	18° ≈ 24'52		max. Earth dist.	-3434 Apr 10 j 01:07		
retrograde	-3442 Jun 25 j 18:59	22° ≈ 29'47		retrograde	-3434 Jul 30 j 04:56		
opposition	-3442 Sep 10 j 12:12	20° ≈ 29'11	0°-53'-15	opposition	-3434 Oct 13 j 11:33		0°-42'-18
min. Earth dist.	-3442 Sep 10 j 03:43	20° ≈ 30′04	18.75855 AU	min. Earth dist.	-3434 Oct 13 j 17:15	24° ∺ 02'15	18.28306 AU
direct	-3442 Nov 24 j 02:15	18° ≈ 30'59		direct	-3434 Dec 27 j 03:06	22° ₭ 01'53	
conjunction	-3441 Mar 10 j 21:24	22° ≈ 29'28	0°-47'-57	conjunction	-3433 Apr 15 j 02:29	26° ∺ 11'06	0°-37'-1

Attention, astronomical year style is used: The year -3433 in astronomical counting style is the year 3434 BCE in historical counting style. minimum elong -3433 Apr 15 j 02:29 26° **★** 11'06 0°37'02 -3425 Apr 21 j 14:19 max. Earth dist. -3433 Apr 14 j 17:55 26° ¥ 09'51 20.25056 AU -3433 Jul 04 j 04:19 $0^{\circ}\Upsilon$ -3425 May 22 j 12:42 1°849'28 0°-12'-10 conjunction 0°12'07 -3433 Aug 03 j 20:19 0°**Υ**24'16 -3425 May 22 j 12:42 1°**8**49'28 retrograde minimum elong -3433 Sep 03 j 18:30 30°R € -3425 May 22 j 08:14 1°**8**48'48 behind sun begin -3433 Oct 17 j 23:05 28° ¥22'44 0°-39'-44 -3425 May 22 j 17:11 1°850'08 opposition behind sun end 1°845'50 19.72449 AU -3433 Oct 18 j 07:36 28° **∺**21'49 18.21763 AU -3425 May 21 j 12:44 min. Earth dist. max. Earth dist. -3425 Sep 08 j 23:55 -3433 Dec 31 j 14:32 26° **€**21'23 direct retrograde 6°**8**08'31 -3432 Apr 09 j 20:06 $0^{\circ}\Upsilon$ -3425 Nov 21 j 20:11 opposition 4°**8**06'05 0°-11'-27 min. Earth dist. -3425 Nov 22 j 16:55 4°**8**03'50 17.69579 AU conjunction -3432 Apr 18 j 22:11 0°**Υ**32'10 0°-34'-34 direct -3424 Feb 05 j 03:19 2°801'30 -3432 Apr 18 j 22:11 -3424 May 25 j 11:37 minimum elong 0°**Υ**32'10 0°34'34 max. Earth dist. 6°**8**20'22 19.66785 AU -3432 Apr 18 j 10:37 0°**Υ**30'28 20.18448 AU max. Earth dist. -3432 Aug 07 j 14:15 retrograde 4°Υ46'09 conjunction -3424 May 26 j 13:53 6°**8**24'22 0°-8'-27 2°**Y**44'31 opposition -3432 Oct 21 j 11:20 0°-36'-54 minimum elong -3424 May 26 j 13:53 6°824'22 0°08'23 min. Earth dist. -3432 Oct 21 j 21:14 2°**Y**43′27 18.15088 AU behind sun begin -3424 May 26 j 07:57 6°823'29 direct -3431 Jan 04 j 04:29 0°\dagge\quad 42'47 behind sun end -3424 May 26 j 19:49 6°**8**25'15 retrograde -3424 Sep 12 j 19:54 10°**8**44'03 conjunction -3431 Apr 23 j 18:37 4°Υ′55'07 0°-31'-54 opposition -3424 Nov 25 j 14:14 8°**8**41'36 0°-7'-15 minimum elong -3431 Apr 23 j 18:37 4°**Y**55′07 0°31'54 min. Earth dist. -3424 Nov 26 j 12:04 8°**と**39'13 17.64124 AU max. Earth dist. -3431 Apr 23 j 05:19 4°**Υ**53'09 20.11707 AU direct -3423 Feb 08 j 23:42 6°836'42 retrograde -3431 Aug 12 j 07:02 9°Y09'54 opposition -3431 Oct 26 i 00:21 7°**Υ**'08'10 0°-33'-50 conjunction -3423 May 31 j 15:36 11°**8**00'58 0°-4'-38 min. Earth dist. -3431 Oct 26 j 12:43 7°**Υ**06'50 18.08304 AU minimum elong -3423 May 31 j 15:36 11°**8**00'58 0°04'36 direct -3430 Jan 08 j 18:04 5°Y06'01 behind sun begin -3423 May 31 j 08:58 10°859'58 behind sun end -3423 May 31 i 22:15 11°801'57 -3430 Apr 28 j 15:52 9°Υ19'54 0°-29'-1 max. Earth dist. -3423 May 30 j 13:32 10°\(256'58\) 19.61529 AU conjunction -3430 Apr 28 j 15:52 9°**Υ**19'54 0°29'02 -3423 Aug 20 j 22:42 15°8 minimum elong -3430 Apr 27 j 23:31 9°**Y**17′28 20.04907 AU -3423 Sep 17 j 17:50 15°**8**21'14 max. Earth dist. retrograde -3430 Aug 17 j 01:23 13°**Y**35′28 -3423 Oct 15 j 19:59 15°R8 retrograde -3430 Oct 30 j 13:47 11°**Y**33'35 0°-30'-33 -3423 Nov 30 j 09:01 13°**8**18'48 0°-2'-58 opposition opposition -3430 Oct 31 j 03:35 11°**Y**32'06 18.01497 AU -3423 Dec 01 j 07:18 13°816'22 17.59070 AU min. Earth dist. min. Earth dist. -3429 Jan 13 j 09:22 -3422 Feb 13 j 21:35 11°**8**13'39 9°**Ƴ**31'00 direct direct -3422 May 26 j 01:52 15°**8** -3429 May 03 j 14:03 13°**Υ**'46'27 0°-25'-57 conjunction -3429 May 03 j 14:03 13°**Y**46'27 0°25'57 -3422 Jun 05 j 17:55 15°**8**39'15 0°00'-43 minimum elong conjunction -3429 May 02 j 20:25 13°**Y**43'49 19.98100 AU -3422 Jun 05 j 17:56 15°**8**39'15 0°00'39 max. Earth dist. minimum elong retrograde -3429 Aug 21 j 19:23 18°**Y**′02'45 behind sun begin -3422 Jun 05 j 11:10 15°**8**38'14 -3422 Jun 06 j 00:42 15°**8**40'15 opposition -3429 Nov 04 j 04:06 16°**Y**00'45 0°-27'-3 behind sun end -3429 Nov 04 j 19:59 15°**Υ**59'02 17.94717 AU min. Earth dist. max. Earth dist. -3422 Jun 04 j 13:53 15°**8**34'56 19.56682 AU direct -3428 Jan 18 j 01:17 13°**Y**57'44 asc. node -3422 Aug 12 j 13:03 19°**8**14'19 retrograde -3422 Sep 22 j 15:14 20°800'04 -3428 May 07 j 12:39 18°Υ 14'42 0°-22'-43 -3422 Dec 05 j 04:32 17°\(\begin{align*} \begin{al conjunction opposition -3428 May 07 j 12:39 18°**Y**14'42 0°22'43 min. Earth dist. minimum elong max. Earth dist. -3428 May 06 j 16:06 18°**Υ**11'37 19.91374 AU direct -3421 Feb 18 j 19:08 15°**8**52'19 -3428 Aug 25 j 13:43 22°**γ**'31'44 retrograde -3428 Nov 07 j 18:58 20°**Υ**'29'35 0°-23'-23 -3421 Jun 10 j 20:53 20°819'11 0°03'16 opposition conjunction -3428 Nov 08 j 12:07 20°**Υ**27'44 17.88067 AU -3421 Jun 10 j 20:54 20°**8**19'11 min. Earth dist. minimum elong 0°03'21 -3427 Jan 21 j 18:07 18°**Υ**26'08 -3421 Jun 10 j 14:10 20°818'10 direct behind sun begin behind sun end -3421 Jun 11 i 03:38 20°820'11 -3427 May 12 i 12:05 22°**Υ**'44'38 0°-19'-20 max. Earth dist. -3421 Jun 09 j 16:54 20°8 14'52 19.52242 AU conjunction minimum elong -3427 May 12 i 12:05 22°**Y**'44'38 0°19'18 retrograde -3421 Sep 27 j 14:48 24°840'30 opposition max. Earth dist. -3427 May 11 j 14:57 22°**Υ**41'27 19.84804 AU -3421 Dec 10 j 00:58 22°\(\mathbf{8}\)38'11 0°05'43 -3427 Aug 30 j 08:53 27°**Y**02'22 retrograde min. Earth dist. -3421 Dec 11 j 00:47 22°835'35 17.50185 AU -3427 Nov 12 j 10:38 25°**Y**00'06 0°-19'-32 opposition direct -3420 Feb 23 j 18:46 20°\(232'38\) min. Earth dist. -3427 Nov 13 j 05:16 24°**Y**58'05 17.81609 AU max. Earth dist. -3420 Jun 13 j 18:34 24°**8**56'05 19.48172 AU -3426 Jan 26 j 12:19 22°**Υ**'56'15 direct -3420 Jun 15 j 00:04 25°**8**00'39 0°07'10 conjunction -3420 Jun 15 j 00:04 25°**8**00'39 -3426 May 17 j 11:57 27°**Y**16'13 0°-15'-49 0°07'16 conjunction minimum elong -3426 May 17 j 11:57 27°**Υ**16'13 0°15'46 -3420 Jun 14 j 17:51 24°**8**59'43 minimum elong behind sun begin -3426 May 16 j 12:09 27°**Y**12'38 19.78478 AU -3420 Jun 15 j 06:16 25°**8**01'35 max. Earth dist. behind sun end -3426 Jul 05 j 00:52 0° 8 retrograde -3420 Oct 01 j 13:11 29°\(22'25\) retrograde -3426 Sep 04 j 03:36 1°**8**34'38 opposition -3420 Dec 13 j 22:18 27°\(\delta 20'10 \) 0°10'04 -3426 Nov 06 j 09:46 30°R**Y** min. Earth dist. -3420 Dec 14 j 23:33 27°**8**17'24 17.46315 AU opposition -3426 Nov 17 j 03:02 29°**Υ**'32'16 0°-15'-33 direct -3419 Feb 27 j 17:38 25°**8**14'25 min. Earth dist. -3426 Nov 17 j 22:50 29°**Υ**30'07 17.75434 AU max. Earth dist. -3419 Jun 18 j 22:04 29°838'54 19.44482 AU

-3425 Jan 31 j 07:06 27°**Y**28'00

direct

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, Attention, astronomical year style is used: The year -3419 in astronomical counting style is the year 3420 BCE in historical counting style. -3419 Jun 20 j 03:41 29°**8**43'30 0°11'02 minimum elong -3412 Jul 24 j 04:43 3°**≤**04'23 0°35'01 conjunction -3419 Jun 20 j 03:40 29°**8**43'29 -3412 Nov 08 j 11:00 7°926'58 minimum elong 0°11'08 retrograde 5°924'58 -3419 Jun 19 j 22:42 29°842'44 -3411 Jan 20 j 21:47 behind sun begin opposition 0°40'24 -3419 Jun 20 j 08:38 29°844'15 behind sun end min. Earth dist. -3411 Jan 21 j 21:58 5°522'20 17.30786 AU -3411 Apr 07 j 15:01 -3419 Jun 24 j 13:52 Π °0 direct 3°9518'21 -3419 Oct 06 j 13:49 max. Earth dist. -3411 Jul 28 j 04:09 7°5946'39 retrograde 4° II 05′38 19.30946 AU opposition -3419 Dec 18 j 20:09 2°**I**103'26 0°14'22 -3411 Jul 29 j 07:04 min. Earth dist. -3419 Dec 19 j 21:10 2°**Д**00'42 17.42806 AU conjunction 7°**9**50'54 0°37'31 -3411 Jul 29 j 07:04 -3418 Feb 23 j 01:39 30°R₩ minimum elong 7°950'54 0°37'38 -3411 Nov 13 j 11:20 12°513'17 direct -3418 Mar 04 j 19:12 29°**8**57'30 retrograde -3418 Mar 14 j 10:27 $0^{\circ}\Pi$ opposition -3410 Jan 25 j 23:19 10°5511'21 0°43'11 -3410 Jan 26 j 21:42 10°508'56 17.31363 AU max. Earth dist. -3418 Jun 24 j 01:04 4°**I**22'46 19.41151 AU min. Earth dist. -3410 Apr 12 j 20:13 direct 8°904'49 conjunction -3418 Jun 25 j 07:33 4°**I**27'31 0°14'51 max. Earth dist. -3410 Aug 02 j 08:56 12°533'21 19.31845 AU minimum elong -3418 Jun 25 j 07:32 4°**Ⅲ**27'31 0°14'57 behind sun begin -3418 Jun 25 j 05:14 4°**Ⅲ**27'10 conjunction -3410 Aug 03 j 09:12 12°537'11 0°39'53 behind sun end -3418 Jun 25 j 09:50 4°**Ⅲ**27'52 minimum elong -3410 Aug 03 j 09:12 12°537'11 0°40'00 retrograde -3418 Oct 11 j 12:29 8°**Ⅱ**49'56 retrograde -3410 Nov 18 j 10:32 16°559'18 opposition -3418 Dec 23 j 18:55 6°**耳**47'47 0°18'35 opposition -3409 Jan 31 j 01:25 14°557'31 0°45'40 min. Earth dist. -3418 Dec 24 j 21:21 6°**Д**44'54 17.39674 AU min. Earth dist. -3409 Jan 31 j 22:56 14°\$55'11 17.32571 AU direct -3417 Mar 09 j 19:03 4°**Ⅱ**41'41 direct -3409 Apr 17 j 23:54 12°551'08 max. Earth dist. -3417 Jun 29 i 04:44 9°**Д**07'41 19.38213 AU max. Earth dist. -3409 Aug 07 i 10:55 17°\$19'25 19.33374 AU conjunction -3417 Jun 30 j 11:27 9°II12'29 0°18'34 conjunction -3409 Aug 08 i 10:35 17°523'10 0°41'59 -3417 Jun 30 j 11:27 9°**Ⅱ**12'29 0°18'42 minimum elong -3409 Aug 08 j 10:35 17°523'10 0°42'07 minimum elong -3417 Oct 16 j 13:49 13°**Ⅲ**35'08 -3409 Nov 23 i 10:38 21°544'59 retrograde retrograde -3417 Dec 28 j 18:09 11°**Д**33'00 0°22'42 -3408 Feb 05 j 03:37 19°543'21 opposition opposition 0°47'51 -3417 Dec 29 j 19:51 11°**Д**30'12 17.36936 AU -3408 Feb 05 j 23:24 19°541'13 17.34404 AU min. Earth dist. min. Earth dist. -3416 Mar 13 j 22:27 9°**Ⅲ**26'45 -3408 Apr 22 j 03:26 17°537'09 direct direct -3416 Jul 03 j 08:55 13°**Д**53'26 19.35686 AU max. Earth dist. -3408 Aug 12 j 11:38 22°508'44 0°43'47 conjunction -3416 Jul 04 j 15:26 13°**Д**58'13 0°22'11 -3408 Aug 12 j 11:38 22°508'44 conjunction minimum elong 0°43'54 -3416 Jul 04 j 15:26 13°**Ⅲ**58'13 -3408 Aug 11 j 14:49 22°505'26 19.35498 AU max. Earth dist. minimum elong -3416 Oct 20 j 12:29 18°**Ц**20'59 -3408 Nov 27 j 10:54 26°530'11 retrograde retrograde -3407 Feb 09 j 05:58 24°\$28'42 0°49'42 -3415 Jan 01 j 18:06 16°**Ⅲ**18'53 0°26'39 opposition opposition -3415 Jan 02 j 20:48 16°**Ц**15'58 17.34645 AU -3407 Feb 10 j 00:23 24°526'44 17.36793 AU min. Earth dist. min. Earth dist. -3415 Mar 18 j 23:12 14°**Ⅲ**12'30 -3407 Apr 27 j 07:19 22°522'45 direct direct conjunction -3415 Jul 09 j 19:03 18°**Ⅲ**44'28 0°25'39 conjunction -3407 Aug 17 j 11:59 26°553'44 0°45'18 -3415 Jul 09 j 19:03 18°**Д**44'28 0°25'46 minimum elong minimum elong -3407 Aug 17 j 11:59 26°553'44 0°45'25 max. Earth dist. -3415 Jul 08 j 12:22 18°**Д**39'39 19.33637 AU max. Earth dist. -3407 Aug 16 j 15:59 26°550'34 19.38151 AU retrograde -3415 Oct 25 j 13:39 23°**Ⅲ**07'18 -3407 Oct 10 j 19:58 $0^{\circ}\Omega$ -3414 Jan 06 j 18:20 21°**Д**05'12 0°30'26 -3407 Dec 02 j 10:19 1°**Ω**14'46 opposition retrograde min. Earth dist. -3414 Jan 07 j 19:52 21°**Д**02'25 17.32838 AU -3406 Jan 26 j 17:44 30° Rூ -3414 Mar 24 j 03:53 18°**Д**58'42 -3406 Feb 14 j 08:24 29°513'27 0°51'12 direct opposition -3406 Feb 15 i 01:27 29°511'37 17.39694 AU min. Earth dist. -3414 Jul 14 j 22:44 23°**Д**31'02 0°28'56 conjunction direct -3406 May 02 j 09:48 27°507'44 -3414 Jul 14 j 22:44 23°**Д**31'02 0°29'05 -3406 Jul 27 i 01:17 minimum elong $0^{\circ}\Omega$ -3414 Jul 13 j 17:16 23°**Д**26'24 19.32082 AU max. Earth dist. retrograde -3414 Oct 30 i 12:00 27° **I** 53'50 -3406 Aug 22 j 11:51 1°Ω37'59 0°46'29 conjunction opposition -3413 Jan 11 j 19:05 25°**II**51'46 0°34'00 -3406 Aug 22 j 11:50 1°Ω37'59 0°46'36 minimum elong min. Earth dist. -3413 Jan 12 j 21:09 25° **II**48'55 17.31558 AU max. Earth dist. -3406 Aug 21 j 18:27 1°**Ω**35'14 19.41278 AU -3413 Mar 29 j 05:54 23°**Ⅱ**45'11 -3406 Dec 07 j 10:32 5°**£**58'31 direct retrograde max. Earth dist. -3413 Jul 18 j 20:28 28° **II** 13'05 19.31091 AU opposition -3405 Feb 19 j 10:50 3°Ω57'21 0°52'21 min. Earth dist. -3405 Feb 20 j 02:01 3°**Ω**55'44 17.43024 AU conjunction -3413 Jul 20 j 01:55 28°**Ⅲ**17'44 0°32'02 direct -3405 May 07 j 14:26 1°**Ω**51'55 minimum elong -3413 Jul 20 j 01:55 28° **1**17'44 0°32'09 -3413 Aug 16 j 18:19 0ಂತಿ -3405 Aug 27 j 10:58 6°**Ω**21'17 0°47'22 conjunction -3413 Nov 04 j 12:48 -3405 Aug 27 j 10:58 retrograde 2°5940'27 minimum elong 6°**Ω**21'17 0°47'28 -3412 Jan 16 j 20:12 -3405 Aug 26 j 18:47 opposition 0°938'24 0°37'19 max. Earth dist. 6°**Ω**18'44 19.44817 AU -3405 Dec 12 j 08:32 $10^{\circ} \Omega 41'17$ min. Earth dist. -3412 Jan 17 j 20:38 0°**5**35'44 17.30864 AU retrograde -3412 Jan 31 j 19:08 30°R∏ -3404 Feb 24 j 13:20 8°**Ω**40'13 0°53'08 opposition direct -3412 Apr 02 j 11:50 28°**Ⅲ**31'46 min. Earth dist. -3404 Feb 25 j 03:19 8°**Ω**38'44 17.46765 AU -3412 May 31 j 18:20 0ಂಣ direct -3404 May 11 j 16:51 6°**Ω**35′04 max. Earth dist. -3412 Jul 23 j 01:32 3°500'06 19.30697 AU -3404 Aug 31 j 09:17 11°**Ω**03'26 conjunction -3412 Jul 24 j 04:44 3°504'23 0°34'54 -3404 Aug 31 j 09:17 11°**Ω**03'26 conjunction minimum elong

Planetary Phenomena of Uranus from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:38, pa Attention, astronomical year style is used: The year -3404 in astronomical counting style is the year 3405 BCE in historical counting style.

Attention, astronomic	cal year style is used: Th	ne year -3404	in astronomical
max. Earth dist.	-3404 Aug 30 j 19:27	11° Ω 01′15	19.48742 AU
	-3404 Nov 17 j 13:30	15° Ω	
retrograde	-3404 Dec 16 j 07:35	15° Ω 22'48	
	-3403 Jan 14 j 16:03	15°R Ω	
opposition	-3403 Feb 28 j 15:29	13° Ω 21′51	0°53'33
min. Earth dist.	-3403 Mar 01 j 03:05	13° Ω 20′37	17.50847 AU
direct	-3403 May 16 j 21:41	11° Ω 16′59	
	-3403 Aug 24 j 12:43	15° Ω	
conjunction	-3403 Sep 05 j 06:53	15° Ω 44'13	0°48'08
minimum elong	-3403 Sep 05 j 06:53	15° Ω 44'13	0°48'13
max. Earth dist.	-3403 Sep 04 j 18:41	15° Ω 42'18	19.52990 AU
retrograde	-3403 Dec 21 j 04:02	20° Ω 02'56	
opposition	-3402 Mar 05 j 17:19	18° Ω 02'04	0°53'37
min. Earth dist.	-3402 Mar 06 j 03:57	18° Ω 00′56	17.55258 AU
direct	-3402 May 21 j 23:20	15° Ω 57'28	
conjunction	-3402 Sep 10 j 03:38	20° £ 23′29	0°48'02
minimum elong	-3402 Sep 10 j 03:38	20° Ω 23′29	0°48'08
max. Earth dist.	-3402 Sep 09 j 17:30	20° Ω 21′54	19.57565 AU
retrograde	-3402 Dec 26 j 01:52	24° Ω 41′29	
opposition	-3401 Mar 10 j 18:50	22° Ω 40'41	0°53'19
min. Earth dist.	-3401 Mar 11 j 02:37	22° Ω 39'51	17.59972 AU
direct	-3401 May 27 j 03:26	20° Ω 36′22	
conjunction	-3401 Sep 14 j 23:20	25° Ω 01′03	0°47'38
minimum elong	-3401 Sep 14 j 23:20	25° Ω 01′03	0°47'42
max. Earth dist.	-3401 Sep 14 j 15:35	24° Ω 59'50	19.62434 AU
retrograde	-3401 Dec 30 j 21:00	29° Ω 18'19	
opposition	-3400 Mar 14 j 20:04	27° Ω 17'33	0°52'40
min. Earth dist.	-3400 Mar 15 j 02:44	27° Ω 16′51	17.65002 AU
direct	-3400 May 31 j 04:03	25° Ω 13'32	
conjunction	-3400 Sep 18 j 18:07	29° Ω 36'47	0°46'55
minimum elong	-3400 Sep 18 j 18:07	29° Ω 36'48	0°46'59
max. Earth dist.	-3400 Sep 18 j 12:22	29° Ω 35'54	19.67631 AU
	-3400 Sep 24 j 22:42	0° m	

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style. -3400 Mar 14 j 20:04 27° **Ω**17'33 0°52'40 conjunction -3393 Oct 20 i 04:28 0°**£**55'30 0°34'31 opposition -3393 Oct 20 j 04:28 -3400 Mar 15 j 02:44 27°Ω16'51 17.65002 AU 0°**£**55'30 0°34'30 min. Earth dist. minimum elong 0°**£**57'14 20.12068 AU -3400 May 31 j 04:03 25°**Ω**13'32 -3393 Oct 20 j 15:54 direct max. Earth dist. -3392 Feb 04 j 19:40 5° **Ω** 06'32 retrograde $-3400 \text{ Sep } 18 \text{ j } 18:07 \quad 29^{\circ} \Omega 36'47 \quad 0^{\circ} 46'55$ -3392 Apr 21 j 07:41 conjunction opposition 3°**ഫ**06'39 0°36'52 -3392 Apr 20 j 20:13 $-3400 \text{ Sep } 18 \text{ j } 18:07 \quad 29^{\circ} \Omega 36'48 \quad 0^{\circ} 46'59$ minimum elong min. Earth dist. 3°**♀**07'49 18.15513 AU -3400 Sep 18 j 12:22 -3392 Jul 07 j 08:37 max. Earth dist. 29°**Ω**35'54 19.67631 AU direct 1°**2**05'54 -3400 Sep 24 j 22:42 0° m -3399 Jan 03 j 17:31 -3392 Oct 23 j 16:29 retrograde 3° Mp 53'16 conjunction 5°**£**16'55 0°31'52 -3392 Oct 23 j 16:30 opposition -3399 Mar 19 j 20:26 1° To 52'33 0°51'42 minimum elong 5°**£**16'55 0°31'52 min. Earth dist. -3399 Mar 19 j 23:54 1° Mp 52'11 17.70351 AU max. Earth dist. -3392 Oct 24 j 04:43 5°**2**18'47 20.18967 AU -3391 Feb 08 j 12:04 -3399 May 15 j 04:22 30°R**Ω** retrograde 9°**₽**27'12 -3399 Jun 05 j 06:15 direct 29°**Ω**48'50 opposition -3391 Apr 26 j 03:03 7°**₽**27'26 0°33'49 -3399 Jun 25 j 22:15 min. Earth dist. -3391 Apr 25 j 13:20 7°**£**28'50 18.22387 AU direct -3391 Jul 12 j 03:18 5°**£**27′07 conjunction -3399 Sep 23 j 12:00 4° **₪** 10'39 0°45'54 minimum elong -3399 Sep 23 j 12:00 4° Mp 10′39 0°45'58 conjunction -3391 Oct 28 j 03:59 9°**£**36'37 0°29'03 max. Earth dist. -3399 Sep 23 j 09:09 4° Mp 10'12 19.73143 AU minimum elong -3391 Oct 28 j 03:59 9°**₽**36'37 0°29'01 retrograde -3398 Jan 08 j 11:25 8° Mp 26'20 max. Earth dist. -3391 Oct 28 j 18:59 9°**೨**38'53 20.25781 AU opposition -3398 Mar 24 j 20:33 6° m 25'40 0°50'24 retrograde -3390 Feb 13 j 02:31 13°**£**46'08 min. Earth dist. -3398 Mar 24 j 22:42 6° Mp 25'26 17.76032 AU opposition -3390 Apr 30 j 21:58 11°**£**46′28 0°30'35 direct -3398 Jun 10 i 05:14 4° m 22'17 min. Earth dist. -3390 Apr 30 i 07:06 11° **△**47'59 18.29132 AU direct -3390 Jul 16 j 20:31 9°**£**46'34 conjunction -3398 Sep 28 i 04:47 8° m 42'35 0°44'37 -3398 Sep 28 j 04:47 8° m 42'35 0°44'39 conjunction -3390 Nov 01 i 14:31 13°**2**54'32 0°26'06 minimum elong -3398 Sep 28 j 03:48 8° m 42'26 19.78997 AU -3390 Nov 01 j 14:31 13°**♀**54'32 max. Earth dist. minimum elong 0°26'05 -3397 Jan 13 j 06:43 12° m 57'29 -3390 Nov 02 j 06:02 13°**2**56'52 20.32449 AU retrograde max. Earth dist. -3397 Mar 29 j 19:55 10° m 56'54 0°48'48 -3389 Feb 17 j 17:09 18° **2**03'19 opposition retrograde -3397 Mar 29 j 18:33 10° m 57'03 17.82046 AU -3389 May 05 j 16:08 16°**♀**03'43 0°27'13 min. Earth dist. opposition -3397 Jun 15 j 05:18 8° m 53'54 -3389 May 04 j 23:23 16° **2**05'24 18.35716 AU direct min. Earth dist. -3389 Jul 21 j 13:28 14°**♀**04'10 direct -3397 Oct 02 j 20:53 13° m 12'40 0°43'04 conjunction -3397 Oct 02 j 20:53 13° m 12'40 0°43'07 -3389 Nov 06 j 00:38 18° **2**10'38 0°23'00 conjunction minimum elong -3389 Nov 06 j 00:38 18°**♀**10'38 0°22'59 -3397 Oct 02 j 23:08 13° m 13'01 19.85170 AU max. Earth dist. minimum elong -3396 Jan 17 j 23:40 17° m 26'47 -3389 Nov 06 j 18:44 18°**2**13'21 20.38927 AU retrograde max. Earth dist. -3396 Apr 02 j 18:49 15° m 26'19 0°46'55 -3388 Feb 22 j 06:24 22°**£**18'40 opposition retrograde -3396 Apr 02 j 16:01 15° Mp 26'36 17.88372 AU -3388 May 09 j 09:25 20°**£**19'06 0°23'43 min. Earth dist. opposition direct -3396 Jun 19 j 02:02 13° m 23'44 min. Earth dist. -3388 May 08 j 15:29 20° **2**20'55 18.42085 AU direct -3388 Jul 25 j 05:39 18°**♀**19'54 -3396 Oct 06 j 11:52 17° m 40'58 0°41'16 conjunction -3396 Oct 06 j 11:53 17° m 40'58 0°41'17 conjunction -3388 Nov 09 j 09:51 22°**2**24'53 0°19'49 minimum elong max. Earth dist. -3396 Oct 06 j 15:42 17° m 41'33 19.91641 AU -3388 Nov 09 j 09:51 22°**£**24'53 0°19'47 minimum elong -3395 Jan 21 j 18:22 21° m 54'18 max. Earth dist. -3388 Nov 10 j 04:16 22°**£**27'38 20.45191 AU retrograde -3395 Apr 07 j 16:53 19° m 53'58 0°44'46 -3387 Feb 25 j 18:51 26°**♀**32'12 opposition retrograde -3395 Apr 07 j 10:47 19° M 54'35 17.94957 AU -3387 May 13 j 06:30 24°**2**34'35 18.48247 AU min. Earth dist. min. Earth dist. -3395 Jun 23 j 23:44 17° m 51'49 direct opposition -3387 May 14 i 01:54 24°**£**32'38 0°20'07 direct -3387 Jul 29 j 20:19 22°**£**33'42 -3395 Oct 11 j 02:15 22° m 07'31 0°39'14 conjunction -3395 Oct 11 j 02:15 22° m 07'31 0°39'15 -3387 Nov 13 j 18:29 26° **△**37'16 0°16'33 minimum elong conjunction max. Earth dist. -3395 Oct 11 j 09:19 22° m 08'36 19.98324 AU minimum elong -3387 Nov 13 j 18:29 26° **△**37'16 0°16'30 retrograde -3394 Jan 26 j 10:17 26° m 20'04 max. Earth dist. -3387 Nov 14 j 15:28 26° **2**40′24 20.51239 AU -3394 Apr 12 j 14:24 24° mp 19'54 0°42'21 -3386 Jan 19 j 05:25 0°M opposition -3394 Apr 12 j 07:02 24° m 20'39 18.01720 AU -3386 Mar 02 j 06:43 min. Earth dist. retrograde 0°M-43'52 -3394 Jun 28 j 18:40 22° m 18'13 direct -3386 Apr 14 j 20:00 30°R Ω opposition -3386 May 18 j 17:32 28° **△**44'18 0°16'27 conjunction -3394 Oct 15 j 15:42 26° Mp 32'21 0°36'58 min. Earth dist. -3386 May 17 j 20:45 28°**Ω**46'24 18.54193 AU minimum elong -3394 Oct 15 j 15:42 26° m 32'21 direct -3386 Aug 03 j 11:05 26°**♀**45'40 0°36'59 -3394 Oct 15 j 23:59 26° m 33'37 20.05163 AU -3386 Nov 04 j 14:44 max. Earth dist. 0°M -3394 Dec 20 j 21:19 0∘**⊽** -3393 Jan 31 j 04:16 -3386 Nov 18 j 02:22 retrograde 0°**ჲ**44'09 conjunction 0°M47'50 0°13'13 -3393 Mar 15 j 02:08 30°R Th minimum elong -3386 Nov 18 j 02:21 0°**IL**47'50 0°13'09 opposition -3393 Apr 17 j 11:19 28° mp 44'07 0°39'43 behind sun begin -3386 Nov 17 j 22:22 0°**IL**47'15 min. Earth dist. -3393 Apr 17 j 01:04 28° Mp 45'10 18.08605 AU behind sun end -3386 Nov 18 j 06:21 0°M48'24 direct -3393 Jul 03 j 14:49 26° m 42'55 max. Earth dist. -3386 Nov 18 j 23:45 0°M51'00 20.57099 AU -3393 Oct 04 j 22:17 retrograde -3385 Mar 06 j 17:47 4°M53'46

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Earth dist. -3385 Nov 22 j 09:48 $4^{\circ}\text{NL}56{}^{\shortmid}\!40$ minimum elong 0°09'47 -3379 Dec 26 j 15:00 0°**∡** -3385 Nov 22 j 04:24 behind sun begin -3378 Apr 04 j 15:25 4°M55'53 retrograde 3°**х¹**25'32 -3385 Nov 22 j 15:11 1°**х¹**26′23 -3378 Jun 21 j 21:06 behind sun end 4°M57'26 opposition 0°-13'-31 -3378 Jun 20 j 16:48 max. Earth dist. -3385 Nov 23 j 09:43 5°ML00'12 20.62797 AU min. Earth dist. 1°**尽**29'13 18.94453 AU retrograde -3384 Mar 10 j 04:33 9°ML01'58 -3378 Aug 01 j 10:42 30°RML opposition -3384 May 26 j 22:32 7°ML02'24 0°08'57 direct -3378 Sep 05 j 19:38 29°M29'58 -3384 May 25 j 22:54 -3378 Oct 10 j 03:07 min. Earth dist. 7°ML04'46 18.65597 AU 0°×7 -3384 Aug 11 j 12:11 direct 5° MO4'18 -3378 Dec 20 j 03:30 conjunction 3°**∡**124'06 0°-13'-51 conjunction -3384 Nov 25 j 16:39 9°M03'56 0°06'28 minimum elong -3378 Dec 20 j 03:30 3°×724'06 0°13'58 minimum elong -3384 Nov 25 j 16:39 9°M03'56 0°06'22 behind sun begin -3378 Dec 20 j 00:04 3°×23'37 behind sun begin -3384 Nov 25 j 10:29 9°M03'03 behind sun end -3378 Dec 20 j 06:56 3°**х**⁴24'35 behind sun end -3384 Nov 25 j 22:50 9°11L04'49 max. Earth dist. -3378 Dec 21 j 08:16 3°**≯**28'15 20.96240 AU max. Earth dist. -3384 Nov 26 j 16:49 9°ML07'30 20.68328 AU retrograde -3377 Apr 09 j 00:19 7°**х** 26′33 retrograde -3383 Mar 14 j 15:03 13°ML08'40 min. Earth dist. -3377 Jun 25 j 03:29 5°**≯**30'12 18.97983 AU min. Earth dist. -3383 May 30 j 11:15 11° ML11'35 18.71053 AU opposition -3377 Jun 26 j 07:02 5°**х** 27′27 0°-17'-6 opposition -3383 May 31 i 11:47 11° ML09'08 0°05'10 direct -3377 Sep 10 i 01:19 3°**х** 31′12 direct -3383 Aug 15 j 22:19 9°M11'19 conjunction -3377 Dec 24 i 08:58 7°**∡**124'44 0°-17'-3 conjunction -3383 Nov 29 i 23:13 13°ML09'49 0°03'03 minimum elong -3377 Dec 24 i 08:58 7°**∡**¹24'44 0°17'11 -3383 Nov 29 j 23:14 13°ML09'49 0°02'59 max. Earth dist. -3377 Dec 25 j 14:40 7°**∡**129'01 20.99511 AU minimum elong behind sun begin -3383 Nov 29 j 16:43 13°ML08'54 retrograde -3376 Apr 12 j 09:25 11°**∡**126'57 -3383 Nov 30 j 05:44 13°M 10'45 -3376 Jun 29 j 16:22 9°×27'52 0°-20'-35 behind sun end opposition max. Earth dist. -3383 Dec 01 j 01:38 13°ML13'42 20.73687 AU min. Earth dist. -3376 Jun 28 j 12:20 9°**∡**30'40 19.00984 AU -3382 Jan 01 j 08:35 15°ML -3376 Sep 13 j 09:38 direct 7°**∡**31'46 -3382 Mar 19 j 00:59 17°**™**14'02 retrograde -3382 Jun 03 j 22:24 15°ML17'10 18.76307 AU -3376 Dec 27 j 14:13 11° ₹24'44 0°-20'-9 min. Earth dist. conjunction -3382 Jun 05 j 00:27 15°ML14'34 0°01'22 -3376 Dec 27 j 14:13 11°**又** 24'44 0°20'17 opposition minimum elong -3382 Jun 11 j 02:07 15°RML -3376 Dec 28 j 18:41 11° ₹28'50 21.02240 AU max. Earth dist. -3382 Aug 20 j 09:23 13°ML17'03 -3375 Apr 16 j 17:35 15° ₹ 26'46 direct retrograde -3382 Oct 16 j 20:53 14°M 38'23 -3375 Jul 02 j 22:23 13°**х** 30'21 19.03449 AU desc. node min. Earth dist. -3382 Oct 24 j 15:01 15°M -3375 Jul 04 j 01:16 13°**x** 27'40 0°-23'-58 opposition direct -3375 Sep 17 j 14:53 11°**尽**31'39 conjunction -3382 Dec 04 j 05:10 17°ML14'30 0°00'-27 -3375 Dec 31 j 19:33 15°**尽** 24'08 0°-23'-9 minimum elong -3382 Dec 04 j 05:09 17°M14'30 0°00'33 conjunction behind sun begin -3382 Dec 03 j 22:38 17°ML13'34 minimum elong -3375 Dec 31 j 19:33 15°**又** 24'08 0°23'17 behind sun end -3382 Dec 04 j 11:40 17°ML15'26 max. Earth dist. -3374 Jan 02 j 00:42 15° ₹28'19 21.04437 AU max. Earth dist. -3382 Dec 05 j 07:39 17°ML18'23 20.78831 AU retrograde -3374 Apr 21 j 02:17 19° ₹25'59 retrograde -3381 Mar 23 j 11:17 21°ML18'16 min. Earth dist. -3374 Jul 07 j 06:21 17° **₹** 29'34 19.05378 AU -3381 Jun 08 j 10:05 19°M21'31 18.81339 AU -3374 Jul 08 j 09:40 17° ₹ 26'51 0°-27'-13 min. Earth dist. opposition -3374 Sep 21 j 22:05 15° ₹30'53 opposition -3381 Jun 09 i 12:36 19°M 18'52 0°-2'-24 direct direct -3381 Aug 24 j 17:58 17° ML21'38 -3373 Jan 05 i 00:36 19° ₹22'56 0°-26'-1 conjunction -3381 Dec 08 j 11:07 21° ML 18'08 0°-3'-54 -3373 Jan 05 i 00:36 19° ₹22'56 0°26'10 conjunction minimum elong minimum elong -3381 Dec 08 i 11:06 21°ML18'08 0°04'00 max. Earth dist. -3373 Jan 06 i 04:31 19° ₹26'56 21.06116 AU behind sun begin -3381 Dec 08 j 04:39 21° ML17'13 retrograde -3373 Apr 25 j 10:12 23° ₹24'41 opposition behind sun end -3381 Dec 08 j 17:34 21° ML19'03 -3373 Jul 12 j 17:45 21° ₹25'27 0°-30'-19 max. Earth dist. -3381 Dec 09 j 15:31 21°ML22'17 20.83721 AU min. Earth dist. -3373 Jul 11 j 15:42 21° ₹28'03 19.06822 AU -3373 Sep 26 j 03:10 19°**х** 29'28 retrograde -3380 Mar 26 j 20:40 25°M21'29 direct -3380 Jun 12 j 23:51 23°M22'11 0°-6'-9 opposition min. Earth dist. -3380 Jun 11 j 20:13 23°ML24'57 18.86074 AU conjunction -3372 Jan 09 j 05:57 23° ₹ 21'13 0°-28'-46 direct -3380 Aug 28 j 03:40 21°M25'15 minimum elong -3372 Jan 09 j 05:57 23°**尽**21'13 0°28'54 max. Earth dist. -3372 Jan 10 j 10:28 23° ₹25'18 21.07329 AU -3380 Dec 11 j 16:41 25°M20'52 0°-7'-16 retrograde -3372 Apr 28 j 18:29 27° ₹ 22'51 conjunction -3380 Dec 11 j 16:41 25°M20'52 0°07'23 -3372 Jul 14 j 22:37 25° ₹ 26'11 19.07811 AU minimum elong min. Earth dist. -3380 Dec 11 j 10:41 25° ML 20'01 -3372 Jul 16 j 01:03 25°**x** 23'32 0°-33'-16 behind sun begin opposition -3372 Sep 29 j 09:10 23°**尽**27'33 behind sun end -3380 Dec 11 j 22:41 25°M21'43 direct max. Earth dist. -3380 Dec 12 j 20:44 25°M24'57 20.88289 AU retrograde -3379 Mar 31 j 06:15 29°M23'53 conjunction -3371 Jan 12 j 11:08 27° **₹** 19'04 0°-31'-22 min. Earth dist. -3379 Jun 16 j 07:20 27°ML27'24 18.90472 AU minimum elong -3371 Jan 12 j 11:08 27° ₹ 19'04 0°31'30 -3379 Jun 17 j 10:47 27°M24'39 0°-9'-52 max. Earth dist. -3371 Jan 13 j 14:20 27° ₹22'57 21.08108 AU opposition -3379 Sep 01 j 10:38 25° ML27'59 -3371 Mar 04 j 18:57 direct

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Earth dist. -3370 Jan 17 j 20:16 1°る20'36 21.08503 AU max. Earth dist. 3°≈09'55 20.96932 AU retrograde -3370 May 07 j 10:53 5°る18'18 retrograde -3362 Jun 09 j 10:39 7°≈11'21 -3370 Jul 24 j 15:06 3°**る**18'49 0°-38'-40 -3362 Aug 25 j 18:06 opposition opposition 5°≈11'26 0°-52'-12 -3370 Jul 23 j 13:33 -3362 Aug 25 j 02:29 min. Earth dist. 3°る21'24 19.08603 AU min. Earth dist. 5°≈13'02 18.95191 AU direct -3370 Oct 07 j 19:13 1°る22'46 direct -3362 Nov 08 j 09:37 3°≈14'32 -3361 Feb 22 j 10:15 conjunction -3369 Jan 20 j 22:01 5°る14'07 0°-36'-5 conjunction 7°**≈**09'11 0°-47'-31 minimum elong -3369 Jan 20 j 22:01 5°る14'07 0°36'14 minimum elong -3361 Feb 22 j 10:15 7°**≈**09'11 0°47'37 max. Earth dist. -3369 Jan 22 j 00:21 5°る17'52 21.08520 AU max. Earth dist. -3361 Feb 23 j 01:43 7°≈11'24 20.93267 AU retrograde -3369 May 11 j 18:18 9°る15'53 retrograde -3361 Jun 13 j 19:57 11°≈13'43 opposition -3369 Jul 28 j 21:44 7°る16'20 0°-41'-6 min. Earth dist. -3361 Aug 29 j 11:53 9°≈14'58 18.91275 AU 7°る18'45 19.08443 AU min. Earth dist. -3369 Jul 27 j 21:46 opposition -3361 Aug 30 j 00:41 9°**≈**13'40 0°-52'-49 direct -3369 Oct 11 i 23:01 5°る20'14 direct -3361 Nov 12 j 14:22 7°≈16'29 conjunction -3368 Jan 25 j 04:01 9°**ට**11'40 0°-38'-12 conjunction -3360 Feb 26 i 20:24 11°≈11'56 0°-47'-57 minimum elong -3368 Jan 25 j 04:01 9°る11'40 0°38'20 minimum elong -3360 Feb 26 j 20:24 11°≈11'56 0°48'04 max. Earth dist. -3368 Jan 26 j 06:36 9°る15'27 21.08174 AU max. Earth dist. -3360 Feb 27 i 10:39 11°≈13'58 20.89125 AU -3368 May 15 j 03:58 13°る13'35 -3360 May 21 j 21:09 15°≈ retrograde -3368 Jul 31 j 03:59 11°る16'26 19.07898 AU -3360 Jun 17 j 06:41 15°≈16'58 min. Earth dist. retrograde -3368 Aug 01 j 04:05 11°♂14'00 0°-43'-20 -3360 Jul 13 j 18:38 15°R≈ opposition -3368 Oct 15 j 04:33 9°る17'52 -3360 Sep 02 j 07:18 13°≈16'45 0°-53'-11 direct opposition -3360 Sep 01 j 19:15 13°≈17'59 18.86903 AU min. Earth dist. -3367 Jan 28 j 10:06 13°♂09'28 0°-40'-9 -3360 Nov 15 j 21:17 11°≈19'16 conjunction direct -3367 Jan 28 j 10:06 13°중09'28 0°40'17 -3359 Feb 25 j 18:01 15°≈ minimum elong -3367 Jan 29 j 10:58 13°**ठ**13'01 21.07433 AU max. Earth dist. -3367 May 19 j 11:09 17°る11'37 -3359 Mar 02 j 06:47 15°≈15'34 0°-48'-9 retrograde conjunction -3367 Aug 05 j 10:29 15°る12'00 0°-45'-22 -3359 Mar 02 j 06:47 15°≈15'34 0°48'15 opposition minimum elong -3367 Aug 04 j 12:16 15°정14'15 19.06961 AU -3359 Mar 02 j 18:26 15°≈17'14 20.84551 AU min. Earth dist. max. Earth dist. direct -3367 Oct 19 j 07:50 13°**ठ**15'49 retrograde -3359 Jun 21 j 16:14 19°≈21'10 opposition -3359 Sep 06 j 14:14 17°≈20'46 0°-53'-16 -3366 Feb 01 j 16:49 17°**⋜**07'42 0°-41'-54 conjunction min. Earth dist. -3359 Sep 06 j 04:51 17°≈21'45 18.82148 AU minimum elong -3366 Feb 01 j 16:49 17°る07'42 0°42'02 direct -3359 Nov 20 j 03:08 15°≈22'58 max. Earth dist. -3366 Feb 02 j 17:38 17°る11'14 21.06297 AU retrograde -3366 May 23 j 21:23 21°る10'08 conjunction -3358 Mar 06 j 18:03 19°≈20'12 0°-48'-6 -3366 Aug 09 j 16:40 19°**♂**10'29 0°-47'-12 minimum elong -3358 Mar 06 j 18:04 19°≈20'12 0°48'12 opposition min. Earth dist. -3366 Aug 08 j 18:39 19°る12'43 19.05603 AU max. Earth dist. -3358 Mar 07 j 04:35 19°≈21'43 20.79640 AU -3366 Oct 23 j 13:38 17°♂14'13 -3358 Jun 26 i 03:35 23°≈26'24 direct retrograde -3358 Sep 10 j 21:08 21°≈25'50 0°-53'-6 opposition -3365 Feb 05 i 23:53 21°る06'29 0°-43'-27 conjunction min. Earth dist. -3358 Sep 10 j 12:26 21°≈26'44 18.77081 AU -3358 Nov 24 j 10:37 19°≈27'41 -3365 Feb 05 j 23:53 21°る06'29 0°43'35 minimum elong direct -3365 Feb 06 j 22:33 21°る09'43 21.04715 AU max. Earth dist. -3365 May 28 i 05:12 25° ₹ 09'16 retrograde conjunction -3357 Mar 11 i 05:55 23°≈25'57 0°-47'-49 opposition -3365 Aug 13 j 23:02 23°る09'35 0°-48'-48 minimum elong -3357 Mar 11 j 05:55 23°≈25'57 0°47'55 min. Earth dist. -3365 Aug 13 j 03:24 23°る11'35 19.03785 AU max. Earth dist. -3357 Mar 11 j 13:54 23°≈27'05 20.74434 AU -3365 Oct 27 j 16:51 21°る13'14 -3357 Jun 30 j 13:43 27°≈32'46 direct retrograde opposition -3357 Sep 15 j 04:33 25°≈32'03 0°-52'-39 -3364 Feb 10 j 07:45 25°る05'59 0°-44'-48 conjunction min. Earth dist. -3357 Sep 14 j 22:29 25°≈32'41 18.71753 AU -3364 Feb 10 j 07:45 25°る05'59 0°44'56 minimum elong direct -3357 Nov 28 j 17:03 23°≈33'33 -3364 Feb 11 j 05:44 25°る09'07 21.02651 AU max. Earth dist. retrograde -3364 May 31 j 15:28 29°る09'08 -3356 Mar 14 j 18:34 27°≈32'56 0°-47'-17 conjunction -3364 Aug 16 j 10:08 27°**궁**11'21 19.01458 AU -3356 Mar 14 j 18:34 27°≈32'56 0°47'21 min. Earth dist. minimum elong -3364 Aug 17 j 05:08 27°**⋜**09'25 0°-50'-11 max. Earth dist. -3356 Mar 15 j 01:15 27°≈33'53 20.68999 AU opposition -3364 Oct 30 j 23:09 25°쥥12'55 direct -3356 Apr 29 j 05:19 0°**∀** retrograde -3356 Jul 04 j 02:07 1°**)**40'25 conjunction -3363 Feb 13 j 15:59 29°る06'14 0°-45'-56 -3356 Sep 10 j 07:23 30°R≈ minimum elong -3363 Feb 13 j 15:59 29°**⋜**06'14 0°46'02 opposition -3356 Sep 18 j 12:01 29°≈39'33 0°-51'-56 max. Earth dist. -3363 Feb 14 j 11:19 29°る08'59 21.00058 AU min. Earth dist. -3356 Sep 18 j 06:37 29°≈40'07 18.66212 AU

direct

-3356 Dec 02 j 01:43 27°≈40'43

-3363 Mar 01 j 12:12 0°≈

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Attention, astronomical year style is used: The year -3355 in astronomical counting style is the year 3356 BCE in historical counting style.							
	-3355 Feb 17 j 05:30	0° ∀		direct	-3347 Jan 04 j 13:34	1° Y 38'34	
conjunction	-3355 Mar 19 j 07:50	1° ¥ 41'17	0°-46'-30	conjunction	-3347 Apr 24 j 02:09	5° Y 50'38	0°-31'-31
minimum elong	-3355 Mar 19 j 07:50	1°) 41′17	0°46'35	minimum elong	-3347 Apr 24 j 02:09	5° Y 50'38	0°31'31
max. Earth dist.	-3355 Mar 19 j 12:06	1°) 41′54	20.63366 AU	max. Earth dist.	-3347 Apr 23 j 12:32		20.12542 AU
retrograde	-3355 Jul 08 j 12:58	5°) 49'30		retrograde	-3347 Aug 12 j 13:55	10° Y 05′13	
opposition	-3355 Sep 22 j 20:10	3°) 48′31	0°-50'-57	opposition	-3347 Oct 26 j 08:35	8° Ƴ 03'25	0°-33'-24
min. Earth dist.	-3355 Sep 22 j 17:21	3°) 48'49	18.60501 AU	min. Earth dist.	-3347 Oct 26 j 21:07	8° Ƴ 02'05	18.09064 AU
direct	-3355 Dec 06 j 08:27	1°) 49′21		direct	-3346 Jan 09 j 02:26	6° Ƴ 01'16	
conjunction	-3354 Mar 23 j 21:55	5° ¥ 51'10	0°-45'-28	conjunction	-3346 Apr 28 j 23:11	10° Ƴ 14'51	0°-28'-38
minimum elong	-3354 Mar 23 j 21:55	5° ¥ 51'10	0°45'32	minimum elong	-3346 Apr 28 j 23:11	10° Ƴ 14'51	0°28'37
max. Earth dist.	-3354 Mar 24 j 00:43	5° 米 51'34	20.57589 AU	max. Earth dist.	-3346 Apr 28 j 06:47	10° Y 12′25	20.05602 AU
retrograde	-3354 Jul 13 j 03:02	10° ∺ 00'09		retrograde	-3346 Aug 17 j 08:31	14° Y 30'13	
opposition	-3354 Sep 27 j 04:36	7° ¥ 59'04	0°-49'-41	opposition	-3346 Oct 30 j 21:56	12° Y 28'15	0°-30'-6
min. Earth dist.	-3354 Sep 27 j 02:32	7° ¥ 59'17	18.54640 AU	min. Earth dist.	-3346 Oct 31 j 11:36	12° Y 26'47	18.02130 AU
direct	-3354 Dec 10 j 18:28	5°) 59'34		direct	-3345 Jan 13 j 18:41	10° Y 25'38	
conjunction	-3353 Mar 28 j 12:59	10°) €02'44	0°-44'-12	conjunction	-3345 May 03 j 21:08	14° Ƴ 40'47	0°-25'-34
minimum elong	-3353 Mar 28 j 12:59	10°) €02'44	0°44'16	minimum elong	-3345 May 03 j 21:09	14° Ƴ 40'47	0°25'33
max. Earth dist.	-3353 Mar 28 j 13:19	10°) 02'47	20.51653 AU	max. Earth dist.	-3345 May 03 j 03:24	14° Y 38'08	19.98684 AU
retrograde	-3353 Jul 17 j 15:06	14°) 12′29		retrograde	-3345 Aug 22 j 01:32	18° Y 56'53	
opposition	-3353 Oct 01 j 13:36	12°) 11′20	0°-48'-9	opposition	-3345 Nov 04 j 12:00		0°-26'-37
min. Earth dist.	-3353 Oct 01 j 14:21			min. Earth dist.	-3345 Nov 05 j 03:52		17.95263 AU
direct	-3353 Dec 15 j 02:24			direct	-3344 Jan 18 j 09:21		
	,				J		
conjunction	-3352 Apr 01 j 04:58	14° ¥ 16′05	0°-42'-41	conjunction	-3344 May 07 j 19:37	19° Ƴ 08'24	0°-22'-20
minimum elong	-3352 Apr 01 j 04:58			minimum elong	-3344 May 07 j 19:37		0°22'18
max. Earth dist.	-3352 Apr 01 j 03:22			max. Earth dist.	-3344 May 06 j 23:14		
retrograde	-3352 Jul 21 j 06:35			retrograde	-3344 Aug 25 j 21:02		
opposition	-3352 Oct 04 j 23:07		0°-46'-21	opposition	-3344 Nov 08 j 02:47		0°-22'-56
min. Earth dist.	-3352 Oct 05 j 00:51			min. Earth dist.	-3344 Nov 08 j 19:36		
direct	-3352 Dec 18 j 13:28		10.12.07.110	direct	-3343 Jan 22 j 03:05		17.00003110
	2502 200 10 j 15.20	11 /(2017			25 15 Van 22 j 05.00	17 11752	
conjunction	-3351 Apr 05 j 21:41	18° ¥ 31'18	0°-40'-55	conjunction	-3343 May 12 j 18:46	23° Ƴ 37'46	0°-18'-56
minimum elong	-3351 Apr 05 j 21:41			minimum elong	-3343 May 12 j 18:46		0°18'55
max. Earth dist.	-3351 Apr 05 j 17:41			max. Earth dist.	-3343 May 11 j 21:47		
retrograde	-3351 Jul 25 j 20:28		20.37317710	retrograde	-3343 Aug 30 j 15:12		17.03274710
opposition	-3351 Oct 09 j 09:26		0°-44'-16	opposition	-3343 Nov 12 j 18:23		0°-19'-6
min. Earth dist.	-3351 Oct 09 j 14:05			min. Earth dist.	-3343 Nov 13 j 12:51		
direct	-3351 Dec 22 j 23:06		10.50122 710	direct	-3342 Jan 26 j 19:38		17.02074710
direct	-5551 Dec 22 j 25.00	10 /(40.54		direct	-3342 Jan 20 j 17.30	23 1 7707	
conjunction	-3350 Apr 10 j 15:31	22°¥48'24	0°-38'-54	conjunction	-3342 May 17 j 18:37	280℃08152	0°-15'-25
minimum elong	-3350 Apr 10 j 15:31			minimum elong	-3342 May 17 j 18:37		0°15'23
max. Earth dist.	-3350 Apr 10 j 19:04			behind sun begin	-3342 May 17 j 17:09		0 1323
retrograde	-3350 Apr 10 j 05:04 -3350 Jul 30 j 13:07		20.52000 AC	behind sun end	-3342 May 17 j 20:04		
opposition	-3350 Oct 13 j 20:09		0°-41'-56	max. Earth dist.	-3342 May 16 j 19:06		19.78963 AU
min. Earth dist.	-3350 Oct 13 j 20:09			max. Earth dist.	-3342 Jun 18 j 07:33	0° 8	19.78903 AU
direct	-3350 Dec 27 j 11:44		10.27371 AU	retrograde	-3342 Juli 18 j 07.33 -3342 Sep 04 j 11:32	2° 8 27'10	
direct	-3330 DCC 27 J 11.44	22 1 30 21		opposition	-3342 Nov 17 j 10:35	0° 8 24'46	0°-15'-7
conjunction	-3349 Apr 15 j 10:19	27° ₩ 07'22	0°-36'-40	min. Earth dist.	-3342 Nov 17 j 10.33		17.75923 AU
minimum elong	-3349 Apr 15 j 10:20			min. Earth dist.	-3342 Nov 18 j 00:01 -3342 Nov 26 j 23:46	0 O22 39 30°RΥ	17.73923 AU
max. Earth dist.	-3349 Apr 15 j 01:23		20.26253 AU	direct	-3341 Jan 31 j 14:46		
max. Earm dist.		27 π 06 03 0° Υ	20.20233 AU	direct			
	-3349 Jun 07 j 22:26				-3341 Apr 05 j 01:57	$_{0}$ 8	
retrograde	-3349 Aug 04 j 04:17	1°Υ20'23			2241 M 22 : 10-10	20 4 1147	00 111 47
onnosition	-3349 Oct 01 j 22:10 -3349 Oct 18 j 07:45	30° ₹ ₩ 29° ₩ 18'52	00 301 20	conjunction	-3341 May 22 j 19:19	2° 8 41'47 2° 8 41'47	
opposition	-			minimum elong	-3341 May 22 j 19:20		U 1144
min. Earth dist.	-3349 Oct 18 j 16:30		18.22867 AU	behind sun begin	-3341 May 22 j 14:39	2°841'06	
direct	-3349 Dec 31 j 23:01	27° ¥ 17'36		behind sun end	-3341 May 23 j 00:00	2° 8 42'29	10.72047 441
	-3348 Mar 24 j 21:04	0° Υ		max. Earth dist.	-3341 May 21 j 19:36		19.72947 AU
	2240 4 40 10 10 10	10000000	00 24 12	retrograde	-3341 Sep 09 j 07:06	7° 8 00'46	00 111 1
conjunction	-3348 Apr 19 j 05:48		0°-34'-12	opposition	-3341 Nov 22 j 03:46	4° 8 58'21	
minimum elong	-3348 Apr 19 j 05:48	1° Υ 28'07		min. Earth dist.	-3341 Nov 23 j 00:20		17.70080 AU
max. Earth dist.	-3348 Apr 18 j 18:07		20.19457 AU	direct	-3340 Feb 05 j 09:42	2° 8 53'47	
retrograde	-3348 Aug 07 j 21:58	5° Υ 41'56	00.26.20		224034 25155	701.3.	00.01.2
opposition	-3348 Oct 21 j 19:49		0°-36'-29	conjunction	-3340 May 26 j 20:18	7° 8 16'32	
min. Earth dist.	-3348 Oct 22 j 05:45	3°°¥'39'13	18.16005 AU	minimum elong	-3340 May 26 j 20:18	7° 8 16'32	0~08'01

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3340 in astronomical counting style is the year 3341 BCE in historical counting style. -3340 May 26 j 14:17 7°**と**15'38 minimum elong -3334 Jun 25 j 14:14 5°**II**20'31 0°15'16 behind sun begin behind sun begin -3340 May 27 j 02:20 7°**8**17'26 -3334 Jun 25 j 12:24 5°**Ⅲ**20'14 behind sun end -3340 May 25 j 18:18 7°**と**12'34 19.67290 AU -3334 Jun 25 j 16:04 5°**Ⅱ**20'48 max. Earth dist. behind sun end -3340 Sep 13 j 03:56 11°836'13 -3334 Oct 11 j 19:56 9°**Ⅱ**43'02 retrograde retrograde -3340 Nov 25 j 21:42 9°**8**33'47 -3334 Dec 24 j 02:10 7°**Ⅱ**40'50 0°18'56 opposition 0°-6'-49 opposition -3334 Dec 25 j 04:51 -3340 Nov 26 j 19:15 min. Earth dist. 9°**8**31'26 17.64618 AU min. Earth dist. 7°**Д**37'55 17.39207 AU -3339 Feb 09 j 06:13 direct 7°**8**28'58 direct -3333 Mar 10 j 02:41 5°**Ⅲ**34'41 max. Earth dist. 10°**Д**00'42 19.37658 AU -3333 Jun 29 j 11:21 -3339 May 31 j 22:10 11°**8**53'09 conjunction 0°-4'-16 minimum elong -3339 May 31 j 22:11 11°**8**53'09 0°04'12 conjunction -3333 Jun 30 j 18:11 10°**Ⅲ**05'31 0°18'52 behind sun begin -3339 May 31 j 15:30 11°**8**52'09 minimum elong -3333 Jun 30 j 18:11 10°**Ⅲ**05'31 0°18'58 -3339 Jun 01 j 04:52 11°**8**54'09 -3333 Oct 16 j 20:39 14°**Д**28'14 behind sun end retrograde -3339 May 30 j 20:17 11°849'12 19.62005 AU -3333 Dec 29 j 01:23 12°**Д**26'02 0°23'00 max. Earth dist. opposition -3339 Jul 27 j 04:09 15°8 min. Earth dist. -3333 Dec 30 j 03:17 12°**Д**23'12 17.36298 AU retrograde -3339 Sep 18 j 01:13 16°813'27 direct -3332 Mar 14 j 04:58 10°**Ⅲ**19'43 -3339 Nov 11 j 11:02 15°R₩ opposition -3339 Nov 30 j 16:20 14°**8**11'04 0°-2'-32 conjunction -3332 Jul 04 j 21:56 14°**I**51'12 0°22'27 min. Earth dist. -3339 Dec 01 j 14:45 14°808'37 17.59513 AU minimum elong -3332 Jul 04 j 21:56 14°**I**[51'12 0°22'34 direct -3338 Feb 14 j 03:42 12°806'01 max. Earth dist. -3332 Jul 03 j 15:13 14°**Д**46'24 19.34981 AU -3338 May 11 j 16:41 15°8 retrograde -3332 Oct 20 j 19:43 19°**Ⅲ**14'04 max. Earth dist. opposition -3331 Jan 02 j 01:13 17°**Ⅱ**11'51 0°26'56 min. Earth dist. -3331 Jan 03 j 04:02 17°**Д**08'55 17.33882 AU conjunction -3338 Jun 06 j 00:34 16°\(\delta\)31'35 0°00'-20 direct -3331 Mar 19 i 06:39 15°**Ⅲ**05'21 minimum elong -3338 Jun 06 j 00:33 16°**8**31'35 0°00'16 max. Earth dist. -3331 Jul 08 j 19:05 19°**Д**32'33 19.32831 AU behind sun begin -3338 Jun 05 j 17:49 16°\(230'35\) -3338 Jun 06 j 07:17 16°\begin{align*} 32'35 \end{align*} -3331 Jul 10 j 01:37 19°**耳**37'21 behind sun end conjunction 0°25'53 -3338 Jul 08 j 02:24 18°**8**26'18 -3331 Jul 10 j 01:37 19°**Ⅲ**37'21 0°26'00 asc. node minimum elong -3338 Sep 22 j 22:51 20°852'29 -3331 Oct 25 j 20:11 24° **II** 00'15 retrograde retrograde -3330 Jan 07 j 01:16 21°**Ц**58'02 0°30'40 opposition opposition -3330 Jan 08 j 02:48 21°**Д**55'15 17.32004 AU -3338 Dec 06 j 11:42 18°847'34 17.54769 AU min. Earth dist. min. Earth dist. -3337 Feb 19 j 01:51 16°**8**44'52 -3330 Mar 24 j 10:28 19°**Ⅲ**51'25 direct direct max. Earth dist. -3337 Jun 09 j 23:28 21°**8**07'24 19.52492 AU -3330 Jul 13 j 23:53 24°**Д**19'10 19.31236 AU max. Earth dist. -3337 Jun 11 j 03:32 21°**8**11'44 0°03'38 -3330 Jul 15 j 05:16 24°**Ⅲ**23'47 0°29'09 conjunction conjunction -3330 Jul 15 j 05:16 24°**Ⅲ**23'47 -3337 Jun 11 j 03:31 21°**8**11'44 0°03'44 minimum elong minimum elong -3337 Jun 10 j 20:49 21°**8**10'43 -3330 Oct 30 j 19:01 28°**Ⅲ**46'40 behind sun begin retrograde -3337 Jun 11 j 10:14 21°**8**12'44 -3329 Jan 12 j 02:06 26°**Ⅱ**44'28 0°34'12 behind sun end opposition retrograde -3337 Sep 27 j 21:57 25°\(\mathbf{2}33'08 \) min. Earth dist. -3329 Jan 13 j 04:03 26°**Ⅱ**41'38 17.30718 AU opposition -3337 Dec 10 j 08:23 23°\(\mathbf{2}\)30'52 0°06'07 direct -3329 Mar 29 j 13:26 24°**Ⅲ**37'46 min. Earth dist. -3337 Dec 11 j 08:32 23°828'13 17.50347 AU max. Earth dist. -3329 Jul 19 j 03:20 29°**Д**05'47 19.30267 AU -3336 Feb 24 j 01:39 21°**8**25'22 direct max. Earth dist. -3336 Jun 14 j 00:56 25°**8**48'47 19.48235 AU -3329 Jul 20 j 08:22 29°**Ⅲ**10'21 0°32'12 conjunction -3329 Jul 20 j 08:22 29°**Ⅲ**10′21 minimum elong -3336 Jun 15 j 06:48 25°**8**53'24 0°07'31 -3329 Aug 02 j 12:48 conjunction 0ಂತಾ -3336 Jun 15 j 06:48 25°**8**53'24 -3329 Nov 04 j 19:16 minimum elong retrograde 3°933'10 -3336 Jun 15 i 00:40 25° \$\frac{8}{52}'29 -3328 Jan 17 i 03:12 behind sun begin opposition 1°531'00 0°37'30 -3336 Jun 15 j 12:55 25° 854'19 behind sun end min. Earth dist. -3328 Jan 18 i 03:17 1°528'23 17.30074 AU -3336 Sep 08 j 12:25 Π °0 -3328 Feb 25 i 02:12 30°R **Ⅱ** retrograde -3336 Oct 01 j 20:24 0°**Ⅱ**15'16 direct -3328 Apr 02 j 18:11 29°**Ⅲ**24'17 -3336 Oct 25 j 11:58 30°R8 -3328 May 09 i 18:50 0ಂತಾ -3336 Dec 14 j 05:39 28°813'01 0°10'27 max. Earth dist. -3328 Jul 23 j 08:28 3°552'43 19.29951 AU opposition min. Earth dist. -3336 Dec 15 j 07:10 28° \$\frac{8}{10}'14 17.46276 AU direct -3335 Feb 28 j 00:57 26°**8**07'18 -3328 Jul 24 j 11:23 3°956'57 0°35'03 conjunction -3328 Jul 24 j 11:23 0°35'09 -3335 Jun 10 j 15:26 $0^{\circ}\Pi$ minimum elong 3°956'57 max. Earth dist. -3335 Jun 19 j 04:33 0°**Д**31'46 19.44333 AU retrograde -3328 Nov 08 j 18:24 8°9519'38 opposition -3327 Jan 21 j 04:44 6°9517'33 0°40'33 conjunction -3335 Jun 20 j 10:23 0°II36'24 0°11'22 min. Earth dist. -3327 Jan 22 j 04:37 6°9514'57 17.30097 AU -3335 Jun 20 j 10:23 0°II36'24 0°11'28 -3327 Apr 07 j 21:43 4°9510'53 minimum elong direct -3335 Jun 20 j 05:33 0°**I**35'40 -3327 Jul 28 j 11:18 8°539'19 19.30316 AU behind sun begin max. Earth dist. -3335 Jun 20 j 15:12 0°**Ⅲ**37′08 behind sun end -3335 Oct 06 j 20:51 4°**I**58'38 -3327 Jul 29 j 13:53 retrograde conjunction 8°**ॐ**43'31 0°37'39 minimum elong opposition -3335 Dec 19 j 03:34 2°**II**56'25 0°14'44 -3327 Jul 29 j 13:53 8°9543'31 0°37'46 min. Earth dist. -3335 Dec 20 j 04:57 2°**I**53'38 17.42546 AU retrograde -3327 Nov 13 j 18:45 13°506'00 direct -3334 Mar 05 j 02:08 0°**I**50′29 opposition -3326 Jan 26 j 06:27 11°**©**04'02 0°43'19 max. Earth dist. -3334 Jun 24 j 07:19 5°**I**15'42 19.40784 AU min. Earth dist. -3326 Jan 27 j 04:23 11°501'40 17.30787 AU -3326 Apr 13 j 02:33 8°957'29 direct

-3334 Jun 25 j 14:14 5°**Ⅲ**20'31 0°15'10

conjunction

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Earth dist. -3318 Dec 26 j 10:34 25°**Ω**36'26 -3325 Apr 18 j 06:19 13°544'01 direct retrograde -3317 Mar 11 j 02:30 23° **Q**35'36 0°53'09 opposition -3317 Mar 11 j 10:31 23° **Q**34'45 17.59250 AU conjunction -3325 Aug 08 j 17:49 18°516'11 0°42'04 min. Earth dist. -3317 May 27 j 10:29 21° **Ω**31'14 minimum elong -3325 Aug 08 j 17:49 18°516'11 0°42'10 direct max. Earth dist. -3325 Aug 07 j 18:20 18°5 12'28 19.32943 AU -3325 Nov 23 j 18:37 22°538'08 -3317 Sep 15 j 07:33 25° Ω 56'04 0°47'28 retrograde conjunction -3324 Feb 05 j 10:56 20°€36'30 0°47'55 -3317 Sep 15 j 07:33 25° Ω 56'04 0°47'32 opposition minimum elong -3317 Sep 14 j 23:32 25°**Ω**54'49 19.61712 AU min. Earth dist. -3324 Feb 06 j 06:26 20°534'24 17.34002 AU max. Earth dist. direct -3324 Apr 22 j 10:41 18°930'19 -3317 Dec 09 j 02:34 0° m retrograde -3317 Dec 31 j 05:24 0° m 13'26 conjunction -3324 Aug 12 j 19:00 23°502'02 0°43'50 -3316 Jan 22 j 18:37 30°R**Ω** minimum elong -3324 Aug 12 j 19:00 23°502'02 0°43'58 opposition -3316 Mar 15 j 03:38 $28^{\circ}\Omega$ 12'38 $0^{\circ}52'28$ max. Earth dist. -3324 Aug 11 j 22:17 22°558'46 min. Earth dist. -3316 Mar 15 j 10:22 $28^{\circ}\Omega$ 11'56 17.64296 AU retrograde -3324 Nov 27 j 18:15 27°523'37 direct -3316 May 31 j 11:24 $26^{\circ}\Omega$ 08'34 opposition -3323 Feb 09 j 13:27 25°522'10 0°49'44 -3316 Sep 10 j 13:20 min. Earth dist. -3323 Feb 10 i 07:57 25°520'10 17.36413 AU direct -3323 Apr 27 j 14:25 23°516'13 conjunction -3316 Sep 19 i 02:17 0° m 32'00 0°46'43 minimum elong -3316 Sep 19 i 02:17 0° m 32'00 0°46'47 conjunction -3323 Aug 17 j 19:35 27°5647'20 0°45'19 max. Earth dist. -3316 Sep 18 i 20:35 0° m 31'06 19.66949 AU -3323 Aug 17 j 19:35 27°5647'20 0°45'25 retrograde -3315 Jan 04 j 02:02 4° m 48'35 minimum elong max. Earth dist. -3323 Aug 16 j 23:24 27°5544'09 19.37764 AU opposition -3315 Mar 20 j 04:07 2° m 47'50 0°51'28 -3323 Sep 23 j 08:16 min. Earth dist. -3315 Mar 20 j 07:33 2° Mp 47'29 17.69706 AU $0^{\circ}\Omega$ -3323 Dec 02 j 18:08 2°Ω08'30 direct -3315 Jun 05 j 13:50 0° Mp 44'06 retrograde -3322 Feb 14 j 15:52 0°Ω07'11 0°51'12 opposition -3322 Feb 15 j 08:54 -3315 Sep 23 j 20:11 5° m 06'04 0°45'42 min. Earth dist. 0°**Ω**05'22 17.39293 AU conjunction -3322 Feb 17 j 11:06 30°Rூ -3315 Sep 23 j 20:11 5° Mp 06'04 0°45'44 minimum elong -3322 May 02 j 17:59 28°501'29 -3315 Sep 23 j 17:15 5° m 05'37 19.72543 AU direct max. Earth dist. -3322 Jul 11 j 07:02 0°**Ω** -3314 Jan 08 j 19:24 9° m 21'52 retrograde 7°m/21'13 0°50'09 -3314 Mar 25 j 04:11 opposition -3322 Aug 22 j 19:42 2°Ω31'53 0°46'29 -3314 Mar 25 j 06:14 7° Mp 21'00 17.75490 AU conjunction min. Earth dist. 2°**Ω**31'53 0°46'35 5° Mp 17'50 -3322 Aug 22 j 19:42 -3314 Jun 10 j 12:42 minimum elong direct max. Earth dist. -3322 Aug 22 j 02:08 2°**Ω**29'07 19.40855 AU retrograde -3322 Dec 07 j 17:49 6°**£**52'32 conjunction -3314 Sep 28 j 13:10 9° m 38'18 0°44'23 opposition -3321 Feb 19 j 18:30 4°Ω51'23 0°52'19 minimum elong -3314 Sep 28 j 13:10 9° m 38'18 0°44'26 min. Earth dist. -3321 Feb 20 j 09:55 4°**Ω**49'44 17.42572 AU max. Earth dist. -3314 Sep 28 j 12:19 9° m/38'10 19.78518 AU -3321 May 07 j 21:43 2°**Ω**45'57 retrograde -3313 Jan 13 j 15:18 13° m 53'19 direct -3313 Mar 30 j 03:40 11° m 52'46 0°48'32 opposition -3321 Aug 27 j 18:50 7°**Ω**15'27 0°47'19 min. Earth dist. -3313 Mar 30 j 02:11 11° m 52'55 17.81626 AU conjunction -3321 Aug 27 j 18:50 7°**Ω**15'27 0°47'25 direct -3313 Jun 15 j 12:37 9° Mp 49'47 minimum elong -3321 Aug 27 i 02:15 7°**Ω**12'50 19.44328 AU max. Earth dist. -3321 Dec 12 i 16:43 $11^{\circ}\Omega$ 35'34 -3313 Oct 03 j 05:15 14° m 08'45 0°42'49 retrograde conjunction -3320 Feb 24 i 21:00 9°Ω34'31 0°53'04 -3313 Oct 03 j 05:15 14° m 08'45 0°42'50 opposition minimum elong -3313 Oct 03 j 07:31 14° m 09'06 19.84810 AU min. Earth dist. -3320 Feb 25 i 11:05 9°**Ω**33'01 17.46235 AU max. Earth dist. direct -3320 May 12 j 00:26 7°Ω29'20 retrograde -3312 Jan 18 i 08:09 18° m 22'59 opposition -3312 Apr 03 i 02:41 16° m 22'34 0°46'38 -3320 Aug 31 j 17:24 $11^{\circ}\Omega$ 57'51 $0^{\circ}47'50$ min. Earth dist. -3312 Apr 02 j 23:56 16° Mp 22'51 17.88058 AU conjunction -3320 Aug 31 j 17:24 $11^{\circ}\Omega$ 57'51 $0^{\circ}47'55$ direct -3312 Jun 19 j 09:45 14° m 20'01 minimum elong -3320 Aug 31 j 03:17 11° **Ω**55'38 19.48169 AU max. Earth dist. -3320 Oct 23 j 19:45 15°**Ω** -3312 Oct 06 j 20:31 18° Mp 37'26 0°41'00 conjunction retrograde -3320 Dec 16 j 15:48 $16^{\circ}\Omega$ 17'20 minimum elong -3312 Oct 06 j 20:31 18° m 37'26 0°41'02 -3319 Feb 11 j 09:55 15°R**Ω** max. Earth dist. -3312 Oct 07 j 00:27 18° m 38'02 19.91372 AU -3319 Feb 28 j 23:02 $14^{\circ}\Omega 16'23$ $0^{\circ}53'27$ retrograde -3311 Jan 22 j 03:03 22° m 50'52 opposition min. Earth dist. -3319 Mar 01 j 11:00 14° Ω15'07 17.50233 AU -3311 Apr 08 j 00:47 20° M 50'36 0°44'27 opposition -3319 May 17 j 04:26 $12^{\circ}\Omega$ 11'28 min. Earth dist. -3311 Apr 07 j 18:49 20° m 51'13 17.94715 AU direct -3319 Aug 09 j 19:45 15°**Ω** direct -3311 Jun 24 j 07:16 18° Mp 48'30 -3319 Sep $05 \text{ j } 15:04 \quad 16^{\circ} \Omega 38'52 \quad 0^{\circ} 48'02$ conjunction conjunction -3311 Oct 11 j 11:06 23° m 04'22 0°38'56 minimum elong -3319 Sep 05 j 15:04 $16^{\circ}\Omega$ 38'52 0°48'07 minimum elong -3311 Oct 11 j 11:07 23° m 04'22 0°38'57 max. Earth dist. -3319 Sep $05 \text{ j } 02:24 \quad 16^{\circ} \Omega 36'53$ 19.52340 AU max. Earth dist. -3311 Oct 11 j 18:04 23° M 05'27 19.98108 AU retrograde -3319 Dec 21 j 12:37 20°**Ω**57'42 -3310 Jan 26 j 19:19 27° Mp 17'01 retrograde -3318 Mar 06 j 01:00 18° **Ω** 56'48 0°53'28 -3310 Apr 12 j 22:38 25° m 16'55 0°42'01 opposition opposition

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3310 in astronomical counting style is the year 3311 BCE in historical counting style. -3310 Apr 12 j 15:33 25° m 17'38 18.01514 AU min. Earth dist. -3303 Dec 27 j 10:30 0°M direct -3310 Jun 29 j 03:15 23° mp 15'17 -3302 Mar 02 j 15:20 1°M41'34 retrograde -3302 May 11 j 14:45 30°R **♀** conjunction -3310 Oct 16 j 00:40 27° m 29'33 0°36'40 min. Earth dist. -3302 May 18 j 05:41 29° **2**44'02 18.53559 AU -3310 Oct 16 j 00:40 27° m 29'33 0°36'40 -3302 May 19 j 02:22 29°**£**41'57 0°15'59 minimum elong opposition -3310 Oct 16 j 08:55 27° mg 30'49 20.04956 AU -3302 Aug 03 j 19:38 27°**£**43'15 max. Earth dist. direct -3310 Nov 28 j 18:31 -3302 Oct 18 j 22:22 0∘თ 0°M retrograde -3309 Jan 31 j 13:16 1°**º**41'26 -3302 Nov 18 j 11:54 conjunction -3309 Apr 10 j 06:00 30°R TQ 1°M45'31 0°12'49 -3302 Nov 18 j 11:54 opposition -3309 Apr 17 j 19:44 29° mp 41'27 0°39'21 minimum elong 1°M45'31 0°12'45 -3302 Nov 18 j 07:42 min. Earth dist. -3309 Apr 17 j 09:43 29° Mp 42'29 18.08385 AU behind sun begin 1°M44'54 -3309 Jul 03 j 23:02 27° m 40'16 -3302 Nov 18 j 16:06 direct behind sun end 1°M46'07 -3309 Sep 18 j 15:15 -3302 Nov 19 j 09:17 0∘**ত** max. Earth dist. 1°M48'41 20.56508 AU retrograde -3301 Mar 07 j 03:43 5°M51'29 conjunction -3309 Oct 20 j 13:45 1°**≙**52'59 0°34'11 opposition -3301 May 23 j 17:18 3°M51'53 0°12'16 minimum elong -3309 Oct 20 j 13:45 1°**£**52'59 0°34'11 min. Earth dist. -3301 May 22 j 19:02 3°M54'07 18.59441 AU max. Earth dist. -3309 Oct 21 j 00:53 1°**£**54'41 20.11824 AU direct -3301 Aug 08 j 08:26 1°M53'28 retrograde -3308 Feb 05 j 04:18 6°**£**04'05 opposition -3308 Apr 21 j 16:08 4°**2**04'13 0°36'29 conjunction -3301 Nov 22 j 19:27 5°M54'28 0°09'27 min. Earth dist. -3308 Apr 21 j 05:09 4°**2**05'21 18.15243 AU minimum elong -3301 Nov 22 j 19:27 5°M54'28 0°09'22 direct -3308 Jul 07 j 18:00 2°**£**03′28 behind sun begin -3301 Nov 22 j 13:56 5°M53'40 behind sun end -3301 Nov 23 i 00:58 5°M55'16 conjunction -3308 Oct 24 i 01:56 6°**♀**14'37 0°31'31 max. Earth dist. -3301 Nov 23 i 19:25 5°ML58'01 20.62314 AU minimum elong -3308 Oct 24 i 01:56 6°**£**14'37 0°31'29 retrograde -3300 Mar 10 j 14:03 9°M59'48 max. Earth dist. -3308 Oct 24 j 13:48 6°**£**16'25 20.18653 AU min. Earth dist. -3300 May 26 j 07:39 8°ML02'38 18.65177 AU retrograde -3307 Feb 08 j 21:06 10° **2**24'57 -3300 May 27 j 07:14 8°ML00'16 0°08'30 opposition -3307 Apr 26 j 11:46 8°**£**25'11 0°33'24 -3300 Aug 11 j 20:49 6°ML02'10 opposition direct min. Earth dist. -3307 Apr 25 j 22:20 8°**2**26'33 18.22024 AU -3307 Jul 12 j 12:03 6°**£**24'50 -3300 Nov 26 j 02:18 10°ML01'57 direct conjunction 0°06'03 -3300 Nov 26 j 02:17 10°ML01'57 minimum elong 0°06'00 -3300 Nov 25 j 20:03 10°ML01'03 -3307 Oct 28 j 13:28 10° **△**34'26 0°28'41 conjunction behind sun begin -3300 Nov 26 j 08:31 10°ML02'51 -3307 Oct 28 j 13:28 10°**Ω**34'26 0°28'40 minimum elong behind sun end -3307 Oct 29 j 04:00 10°**2**36'38 20.25361 AU -3300 Nov 27 j 02:30 10°ML05'31 20.67974 AU max. Earth dist. max. Earth dist. -3306 Feb 13 j 10:43 14°**Ω**43'59 -3299 Mar 15 j 00:48 14°M 06'45 retrograde retrograde -3306 May 01 j 06:47 12°**2**44'18 0°30'10 -3299 May 31 j 20:38 12°ML07'16 0°04'43 opposition opposition -3306 Apr 30 j 16:22 12°**Ω**45'46 18.28657 AU -3299 May 30 j 19:55 12°M 09'45 18.70759 AU min. Earth dist. min. Earth dist. -3306 Jul 17 j 05:47 10° **△**44'20 -3299 Aug 16 j 07:24 10°M 09'29 direct direct conjunction -3306 Nov 02 j 00:12 14°**£**52'24 0°25'42 conjunction -3299 Nov 30 j 08:46 14°ML08'09 0°02'38 minimum elong -3306 Nov 02 j 00:12 14°**£**52'24 0°25'40 minimum elong -3299 Nov 30 j 08:46 14°ML08'09 0°02'33 max. Earth dist. -3306 Nov 02 j 15:14 14°**£**54'40 20.31921 AU behind sun begin -3299 Nov 30 j 02:14 14°ML07'13 retrograde -3305 Feb 18 j 02:14 19°**♀**01'12 behind sun end -3299 Nov 30 j 15:17 14°ML09'04 -3305 May 05 j 08:26 17°**2**03'13 18.35137 AU max. Earth dist. -3299 Dec 01 j 11:20 14°ML12'03 20.73449 AU min. Earth dist. -3305 May 06 j 00:57 17°**♀**01'33 0°26'46 -3299 Dec 15 j 03:51 15°M opposition direct -3305 Jul 21 j 22:19 15°**♀**01'55 -3298 Mar 19 j 11:06 18°M 12'26 retrograde -3298 Jun 04 j 07:27 16° ML 15'38 18.76118 AU min. Earth dist. -3305 Nov 06 j 10:15 19° **2**08'28 0°22'36 -3298 Jun 05 j 09:24 16°M 13'02 0°00'55 conjunction opposition -3305 Nov 06 j 10:15 19°**£**08'28 0°22'35 -3298 Jul 08 i 03:29 15°RML minimum elong -3305 Nov 07 j 03:56 19° **2**11'07 20.38305 AU -3298 Aug 20 j 18:27 14° ML 15'35 max. Earth dist. direct retrograde -3304 Feb 22 i 14:32 23° **2**16'30 desc. node -3298 Sep 03 j 11:53 14° M20'27 opposition -3304 May 09 i 18:18 21° \(\Omega\) 16'53 0°23'16 -3298 Oct 01 j 16:12 15°M min. Earth dist. -3304 May 09 j 00:44 21° **2**18'40 18.41428 AU direct -3304 Jul 25 j 14:29 19°**£**17'35 conjunction -3298 Dec 04 j 14:51 18°ML13'10 0°00'-52 -3298 Dec 04 j 14:51 18°M 13'10 minimum elong 0°00'57 -3304 Nov 09 j 19:28 23°**2**22'38 0°19'25 conjunction behind sun begin -3298 Dec 04 j 08:19 18°M 12'15 minimum elong -3304 Nov 09 j 19:28 23°**2**22'38 0°19'22 behind sun end -3298 Dec 04 j 21:23 18°ML14'06 max. Earth dist. -3304 Nov 10 j 13:35 23°**Ω**25'21 20.44516 AU max. Earth dist. -3298 Dec 05 j 17:23 18°ML17'03 20.78688 AU retrograde -3303 Feb 26 j 04:20 27°**Ω**29'57 retrograde -3297 Mar 23 j 20:40 22° 11.17'01 -3303 May 14 j 10:40 25°**♀**30'20 0°19'40 opposition -3297 Jun 09 j 21:31 20°M 17'42 opposition 0°-2'-50 min. Earth dist. -3303 May 13 j 15:20 25°**2**32'17 18.47567 AU min. Earth dist. -3297 Jun 08 j 19:03 20°M20'21 18.81230 AU -3303 Jul 30 j 05:15 23°**♀**31'19 direct -3297 Aug 25 j 03:06 18°M20'32 direct conjunction -3303 Nov 14 j 04:08 27°**△**34'58 0°16'08 conjunction -3297 Dec 08 j 20:49 22°M17'10 0°-4'-18 minimum elong -3303 Nov 14 j 04:08 27°**2**34'58 0°16'05 minimum elong -3297 Dec 08 j 20:49 22°ML17'10 0°04'25 behind sun begin -3303 Nov 14 j 03:03 27°**2**34'48 behind sun begin -3297 Dec 08 j 14:24 22°M16'15 behind sun end -3303 Nov 14 j 05:13 27°**Ω**35'07 behind sun end -3297 Dec 09 j 03:15 22°ML18'05

max. Earth dist.

-3297 Dec 10 j 01:14 22°M21'19 20.83637 AU

max. Earth dist.

-3303 Nov 15 j 00:59 27°**2**38'04 20.50575 AU

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3296 in astronomical counting style is the year 3297 BCE in historical counting style. -3296 Mar 27 i 06:35 26° ML 20'35 retrograde opposition -3289 Jul 13 i 02:43 22° ₹ 23'39 0°-30'-35 min. Earth dist. -3296 Jun 12 j 05:39 24°ML24'05 18.86002 AU direct -3289 Sep 26 j 13:00 20° ₹27'33 -3296 Jun 13 j 08:59 24°M21'21 0°-6'-35 opposition direct -3296 Aug 28 j 12:49 22°M24'28 -3288 Jan 09 j 15:17 24° ₹ 19'12 0°-29'00 conjunction -3288 Jan 09 j 15:17 24° ₹ 19'12 0°29'08 minimum elong -3288 Jan 10 j 20:02 24°**尽** 23'19 21.07029 AU -3296 Dec 12 j 02:26 26°M20'13 0°-7'-39 conjunction max. Earth dist. -3296 Dec 12 j 02:26 26°M20'13 -3288 Apr 29 j 02:51 28°**尽** 20'43 minimum elong 0°07'47 retrograde behind sun begin -3296 Dec 11 j 20:30 26°ML19'23 -3288 Jul 15 j 07:30 26° ₹23'58 19.07569 AU min. Earth dist. -3288 Jul 16 j 10:05 26° ₹21'18 behind sun end -3296 Dec 12 j 08:21 26°M21'03 opposition 0°-33'-30 -3288 Sep 29 j 19:42 24° ₹25'12 max. Earth dist. -3296 Dec 13 j 06:19 26°M24'16 20.88219 AU direct -3295 Feb 28 j 17:48 0°**∡**¹ -3295 Mar 31 j 15:37 -3287 Jan 12 j 20:15 28° ₹ 16'38 0°-31'-34 retrograde 0°**х** 23′16 conjunction -3287 Jan 12 j 20:15 28° **₹** 16'38 0°31'41 -3295 May 02 j 06:21 30°RM minimum elong opposition -3295 Jun 17 j 19:56 28°ML24'06 0°-10'-18 max. Earth dist. -3287 Jan 13 j 23:44 28° ₹20'34 21.07925 AU min. Earth dist. -3295 Jun 16 j 16:40 28°M26'49 18.90394 AU -3287 Feb 12 j 23:19 0°궁 direct -3295 Sep 01 j 20:25 26°M27'27 retrograde -3287 May 03 j 10:19 2°る18'09 -3295 Dec 09 j 21:42 0°**∡**¹ opposition -3287 Jul 20 j 17:15 0°る18'41 0°-36'-15 min. Earth dist. -3287 Jul 19 j 15:48 0°る21'14 19.08289 AU conjunction -3295 Dec 16 j 08:06 0°**₹**22'24 0°-10'-58 -3287 Jul 28 j 11:59 30°R*≯* minimum elong -3295 Dec 16 j 08:05 0°**х** 22′24 0°11'05 direct -3287 Oct 03 j 23:13 28°**х** 22′35 behind sun begin -3295 Dec 16 j 03:09 21'42 **ح** -3287 Dec 06 j 12:50 0°궁 behind sun end -3295 Dec 16 j 13:02 0°**₹**23'06 max. Earth dist. -3295 Dec 17 j 13:22 0°**х** 26'38 20.92387 AU conjunction -3286 Jan 17 i 01:38 2°**る**13'55 0°-33'-59 retrograde -3294 Apr 05 i 00:55 4°×25'07 minimum elong -3286 Jan 17 i 01:38 2°る13'55 0°34'07 min. Earth dist. -3294 Jun 21 i 02:29 2°**∡**128'47 18.94328 AU max. Earth dist. -3286 Jan 18 j 05:48 2°る17'56 21.08463 AU -3294 Jun 22 i 06:22 2°**х** 26′00 0°-13'-56 retrograde -3286 May 07 j 18:43 6°**ප**15'29 opposition -3294 Sep 06 j 04:48 29'34**٪** min. Earth dist. -3286 Jul 23 j 22:17 4°る18'34 19.08641 AU direct -3286 Jul 25 j 00:01 4°る15'59 0°-38'-50 opposition -3294 Dec 20 j 13:25 4°**₹**¹23'45 0°-14'-13 -3286 Oct 08 j 05:02 2°る19'54 conjunction direct -3294 Dec 20 j 13:25 4°**₹**23'45 0°14'21 minimum elong -3285 Jan 21 j 07:05 -3294 Dec 20 j 10:16 4°**х** 23′18 6°**ප**11'12 0°-36'-14 behind sun begin conjunction -3285 Jan 21 j 07:05 -3294 Dec 20 j 16:34 4°**х** 24′11 behind sun end minimum elong 6°**ප**11'12 0°36'22 -3294 Dec 21 j 17:44 4°**✗**27'51 20.96077 AU -3285 Jan 22 j 09:41 6°る15'00 21.08633 AU max. Earth dist. max. Earth dist. -3285 May 12 j 02:50 10°る12'55 -3293 Apr 09 j 09:50 8°**∡**¹26′11 retrograde retrograde -3285 Jul 28 j 06:27 -3293 Jun 26 j 16:24 6°**х** 27'04 0°-17'-30 8°る15'50 19.08626 AU opposition min. Earth dist. 6°**х** 29'47 18.97773 AU -3285 Jul 29 j 06:42 -3293 Jun 25 j 13:04 8°**ට**13'23 0°-41'-15 min. Earth dist. opposition -3293 Sep 10 j 11:44 4°**х** 30′47 -3285 Oct 12 j 08:26 6°**ප**17'18 direct direct conjunction -3293 Dec 24 j 18:55 8°**∡**124'18 0°-17'-23 conjunction -3284 Jan 25 j 13:02 10°₹08'43 0°-38'-20 -3284 Jan 25 j 13:02 10°**⋜**08'43 0°38'28 minimum elong -3293 Dec 24 j 18:55 8°**≯**24'18 0°17'30 minimum elong max. Earth dist. -3293 Dec 26 j 00:10 8°**∡**728'31 20.99252 AU max. Earth dist. -3284 Jan 26 j 15:56 10°중12'33 21.08422 AU retrograde -3292 Apr 12 j 18:30 12° ₹ 26'27 retrograde -3284 May 15 j 11:29 14°る10'36 -3292 Jun 28 j 21:54 10° ₹ 30'05 19.00678 AU opposition -3284 Aug 01 j 12:57 12°정11'04 0°-43'-27 min. Earth dist. -3292 Jun 30 j 01:35 10°**又** 27'19 min. Earth dist. -3284 Jul 31 j 12:43 12°중13'31 19.08207 AU opposition 0°-20'-57 direct -3292 Sep 13 j 19:24 8°**₮**31'08 direct -3284 Oct 15 j 13:24 10°**♂**14'59 -3292 Dec 28 i 00:04 12° ₹ 24'04 0°-20'-28 -3283 Jan 28 j 19:10 14°る06'36 0°-40'-15 conjunction conjunction -3292 Dec 28 j 00:04 12°**₹**24'04 0°20'36 -3283 Jan 28 j 19:10 14°る06'36 0°40'22 minimum elong minimum elong -3292 Dec 29 j 04:06 12° ₹28'06 21.01900 AU -3283 Jan 29 j 20:09 14°る10'09 21.07801 AU max. Earth dist. max. Earth dist. -3283 May 19 i 20:17 18°る08'44 retrograde -3291 Apr 17 i 02:44 16° ₹ 25'59 retrograde -3283 Aug 05 j 19:24 16°**⋜**09'12 0°-45'-28 -3291 Jul 03 i 07:43 14° ₹29'28 19.03077 AU min. Earth dist. opposition -3291 Jul 04 j 10:32 14° ₹ 26'47 0°-24'-18 min. Earth dist. -3283 Aug 04 j 21:00 16°る11'28 19.07375 AU opposition direct -3291 Sep 18 j 01:13 12° ₹30'40 direct -3283 Oct 19 j 16:57 14°る13'05 -3290 Jan 01 j 05:07 16° ₹23'04 0°-23'-26 -3282 Feb 02 j 01:49 18° පි05'00 0°-41'-58 conjunction conjunction -3290 Jan 01 j 05:07 16° ₹23'04 0°23'33 minimum elong minimum elong -3282 Feb 02 j 01:49 18°정05'00 0°42'06 -3290 Jan 02 j 10:09 16° ₹27'14 21.04051 AU max. Earth dist. max. Earth dist. -3282 Feb 03 j 02:45 18°중08'33 21.06746 AU -3290 Apr 21 j 11:01 20°**√**24'48 retrograde retrograde -3282 May 24 j 05:37 22°る07'26 -3290 Jul 08 j 18:52 18°**✗** 25'32 0°-27'-31 min. Earth dist. -3282 Aug 09 j 03:38 20° **조**10'07 19.06074 AU opposition min. Earth dist. -3290 Jul 07 j 15:37 18° ₹28'15 19.04990 AU -3282 Aug 10 j 01:39 20°る07'53 0°-47'-16 opposition -3290 Sep 22 j 08:36 16° ₹ 29'26 direct -3282 Oct 23 j 21:54 18°**♂**11'43 direct -3289 Jan 05 j 10:06 20° ₹721'24 0°-26'-17 -3281 Feb 06 j 09:00 22°**る**04'01 conjunction conjunction 0°-43'-30 -3281 Feb 06 j 08:59 22°る04'01 minimum elong -3289 Jan 05 j 10:06 20° ₹21'24 0°26'25 minimum elong 0°43'37 max. Earth dist. -3289 Jan 06 j 14:00 20° ₹25'24 21.05744 AU max. Earth dist. -3281 Feb 07 j 07:31 22°る07'13 21.05197 AU -3289 Apr 25 j 18:39 24° ₹23'00 -3281 May 28 j 14:31 26°**⋜**06'48 retrograde retrograde min. Earth dist. -3289 Jul 12 j 00:31 22° ₹ 26'16 19.06482 AU -3281 Aug 14 j 07:57 24°る07'13 0°-48'-50 opposition

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3281 in astronomical counting style is the year 3282 BCE in historical counting style. min. Earth dist. -3281 Aug 13 j 12:18 24°る09'12 19.04270 AU max. Earth dist. -3273 Mar 11 j 22:23 24°≈23'40 20.75240 AU -3281 Oct 28j01:51 22°る10'56 -3273 Jun 30 j 21:33 28°≈29'08 direct retrograde -3273 Sep 15 j 13:04 26°≈28'25 0°-52'-28 opposition -3280 Feb 10 j 16:52 26°る03'42 0°-44'-49 min. Earth dist. -3273 Sep 15 j 06:37 26°≈29'05 18.72636 AU conjunction -3280 Feb 10 j 16:52 26° **중**03'42 0°44'56 -3273 Nov 29 j 01:32 24°≈29'57 minimum elong direct -3280 Feb 11 j 14:46 26°る06'49 21.03124 AU max. Earth dist. -3272 Mar 15 j 02:36 28°≈29'08 0°-47'-6 -3280 May 15 j 03:56 0°≈ conjunction -3272 Mar 15 j 02:36 28°≈29'08 retrograde -3280 Jun 01 j 00:48 0°≈06'52 minimum elong 0°47'11 -3272 Mar 15 j 09:49 -3280 Jun 17 j 21:18 30°Ŗる max. Earth dist. 28°≈30'11 20.69955 AU opposition -3280 Aug 17 j 14:14 28°**ප**07'13 0°-50'-11 -3272 Apr 11 j 00:10 0°**∀** min. Earth dist. -3280 Aug 16 j 19:16 28°**る**09'09 19.01914 AU retrograde -3272 Jul 04 j 10:15 2°\ 36'29 -3280 Oct 31 j 07:33 26° ₹ 10'47 -3272 Sep 18 j 20:38 direct opposition 0°**)**35'39 0°-51'-44 -3279 Feb 12 j 20:17 -3272 Sep 18 j 14:47 min. Earth dist. 0°**₭**36'16 18.67239 AU -3272 Oct 03 j 07:39 30°R≈ conjunction -3279 Feb 14 j 00:55 0°≈04'05 0°-45'-55 direct -3272 Dec 02 j 10:01 28°≈36'53 minimum elong -3279 Feb 14 j 00:55 0°≈04'05 0°46'03 -3271 Jan 29 j 10:23 0°**)**€ max. Earth dist. -3279 Feb 14 j 20:06 0°≈06'49 21.00493 AU retrograde -3279 Jun 05 j 09:09 4°≈07'39 conjunction -3271 Mar 19 j 15:39 2°**)** 37'14 0°-46'-18 opposition -3279 Aug 21 j 20:47 2°**≈**07'53 0°-51'-17 minimum elong -3271 Mar 19 j 15:39 2°**)** 37'14 0°46'22 min. Earth dist. -3279 Aug 21 j 04:21 2°≈09'34 18.99010 AU max. Earth dist. -3271 Mar 19 j 20:15 2°**₭**37'54 20.64460 AU direct -3279 Nov 04 j 11:57 0°≈11'15 retrograde -3271 Jul 08 j 21:33 6°**)** 45′20 opposition -3271 Sep 23 i 04:50 4°\(\)44'24 0°-50'-43 conjunction -3278 Feb 18 i 09:48 4°≈05'09 0°-46'-48 min. Earth dist. -3271 Sep 23 i 01:37 4°**)** 44'44 18.61650 AU minimum elong -3278 Feb 18 i 09:48 4°**≈**05'09 0°46'54 direct -3271 Dec 06 j 16:58 2° **)** 45'19 max. Earth dist. -3278 Feb 19 j 04:10 4°≈07'46 20.97331 AU -3278 Jun 09 j 20:10 8°≈09'08 -3270 Mar 24 j 05:50 6°¥46'57 0°-45'-16 retrograde conjunction -3278 Aug 25 j 11:27 6°≈10'50 18.95583 AU -3270 Mar 24 j 05:50 6°¥46'57 0°45'20 min. Earth dist. minimum elong -3278 Aug 26 j 03:05 -3270 Mar 24 j 09:05 6°**)**47′25 20.58785 AU 6°≈09'14 0°-52'-8 max. Earth dist. opposition -3278 Nov 08 j 18:37 -3270 Jul 13 j 11:22 10° **★** 55'48 direct 4°≈12'21 retrograde -3270 Sep 27 j 13:10 8°\ 54'48 0°-49'-26 opposition 8°≈06'54 0°-47'-27 -3277 Feb 22 j 19:03 -3270 Sep 27 j 10:48 8°**升**55'03 18.55870 AU conjunction min. Earth dist. -3277 Feb 22 j 19:03 -3270 Dec 11 j 02:16 minimum elong 8°≈06'54 0°47'34 direct 6°**¥**55′25 max. Earth dist. -3277 Feb 23 j 10:36 8°≈09'07 20.93666 AU -3277 Jun 14 j 04:17 12°≈11'21 -3269 Mar 28 j 20:54 10° ¥ 58'24 0°-43'-58 retrograde conjunction -3277 Aug 30 j 09:40 10°≈11'17 0°-52'-43 -3269 Mar 28 j 20:54 10° ¥ 58'24 0°44'02 opposition minimum elong -3277 Aug 29 j 20:42 10°≈12'37 18.91690 AU -3269 Mar 28 j 21:21 10° ¥ 58'28 20.52903 AU min. Earth dist. max. Earth dist. -3269 Jul 18 j 00:05 15° **★** 08'04 direct -3277 Nov 12 j 23:11 8°≈14'06 retrograde opposition -3269 Oct 01 j 22:19 13°**)** 07'00 0°-47'-53 conjunction -3276 Feb 27 j 04:57 12°≈09'25 0°-47'-51 min. Earth dist. -3269 Oct 01 j 22:55 13°**米**06'56 18.49883 AU minimum elong -3276 Feb 27 j 04:57 12°≈09'25 0°47'57 direct -3269 Dec 15 j 10:40 11°**₭**07'18 max. Earth dist. -3276 Feb 27 j 19:39 12°≈11'31 20.89565 AU -3276 Apr 22 j 02:31 15°≈ -3268 Apr 01 j 12:50 15° ¥ 11'42 0°-42'-26 conjunction -3276 Jun 17 j 15:24 16°≈14'20 -3268 Apr 01 j 12:50 15°**米**11'42 0°42'29 retrograde minimum elong -3276 Aug 14 j 14:08 15°R≈ -3268 Apr 01 j 11:28 15°**)** 11'30 20.46811 AU max. Earth dist. -3276 Sep 02 j 16:05 14°≈14'06 0°-53'-3 -3268 Jul 21 j 15:09 19°**米**22'11 opposition retrograde -3276 Sep 02 i 03:50 14°≈15'21 18.87386 AU -3268 Oct 05 i 07:49 17° \(\)21'02 0°-46'-3 min. Earth dist. opposition -3276 Nov 16 i 06:49 12°≈16'37 -3268 Oct 05 j 09:28 17° ** 20'52 18.43671 AU direct min. Earth dist. -3275 Feb 09 i 03:20 15°≈ direct -3268 Dec 18 j 21:41 15° **★** 21'01 -3275 Mar 02 j 15:16 16°≈12'45 0°-48'-2 -3267 Apr 06 j 05:41 19°**)** €26'52 0°-40'-39 conjunction conjunction -3275 Mar 02 i 15:16 16°≈12'45 0°48'08 -3267 Apr 06 i 05:41 19°\tag{26'52} 0°40'41 minimum elong minimum elong -3275 Mar 03 j 03:16 16°≈14'28 20.85087 AU max. Earth dist. -3267 Apr 06 j 01:29 19° **)** 26'15 20.40476 AU max. Earth dist. -3275 Jun 22 j 00:04 20°≈18'13 retrograde -3267 Jul 26 j 04:50 23°**₭**38'10 retrograde opposition -3275 Sep 06 j 22:55 18°≈17'48 0°-53'-7 opposition min. Earth dist. -3275 Sep 06 j 13:14 18°≈18'48 18.82749 AU min. Earth dist. -3267 Oct 09 j 22:49 21°**)** 36'27 18.37223 AU direct -3275 Nov 20 j 11:39 16°≈19'59 direct -3267 Dec 23 j 07:29 19°**₭**36'33 -3274 Mar 07 j 02:19 20°≈17'03 0°-47'-58 -3266 Apr 10 j 23:31 23°**米**43'53 0°-38'-37 conjunction conjunction -3274 Mar 07 j 02:19 20°≈17'03 -3266 Apr 10 j 23:31 23° ¥43'53 0°38'38 minimum elong 0°48'03 minimum elong -3274 Mar 07 j 13:24 20°≈18'38 20.80303 AU -3266 Apr 10 j 17:00 23° ¥42'56 20.33921 AU max. Earth dist. max. Earth dist. -3266 Jul 30 j 21:19 27° **∺** 56'01 retrograde -3274 Jun 26 j 11:46 24°≈23'06 retrograde opposition -3274 Sep 11 j 05:49 22°≈22'31 0°-52'-56 opposition -3266 Oct 14 j 04:53 25° ¥ 54'40 0°-41'-36 min. Earth dist. -3274 Sep 10 j 20:45 22°≈23'28 18.77816 AU min. Earth dist. -3266 Oct 14 j 10:46 25° ★54'02 18.30549 AU direct -3274 Nov 24 j 19:53 20°≈24'23 direct -3266 Dec 27 j 20:26 23° **★** 53'53 -3273 Mar 11 j 14:03 24°≈22'28 0°-47'-39 -3265 Apr 15 j 18:12 28° **★**02'43 0°-36'-21 conjunction conjunction

-3265 Apr 15 j 18:13 28° **米**02'43 0°36'23

minimum elong

-3273 Mar 11 j 14:03 24°≈22'28 0°47'43

minimum elong

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3265 in astronomical counting style is the year 3266 BCE in historical counting style. -3265 Apr 15 j 09:00 28° ★01'22 20.27139 AU -3257 Jan 31 j 22:11 29°**Υ**15'04 max. Earth dist. direct -3265 May 20 j 05:00 $0^{\circ}\Upsilon$ -3257 Mar 14 j 14:31 0°X -3265 Aug 04 j 12:03 2°Y15'39 -3257 May 22 j 02:55 3°**8**32'40 19.73778 AU retrograde max. Earth dist. -3265 Oct 18 j 16:19 0°Υ14'11 0°-38'-58 opposition 0°Υ13'14 18.23685 AU -3265 Oct 19 j 01:12 -3257 May 23 j 02:19 min. Earth dist. conjunction 3°**8**36'13 0°-11'-27 -3265 Oct 24 j 05:27 -3257 May 23 j 02:19 30°**₹** minimum elong 3°**8**36'13 0°11'24 -3264 Jan 01 j 07:57 direct -3257 May 22 j 21:28 28°**)** 12'57 behind sun begin 3°**8**35'30 -3264 Mar 07 j 15:48 $0^{\circ}\Upsilon$ -3257 May 23 j 07:09 behind sun end 3°**8**36'56 -3257 Sep 09 j 15:07 retrograde 7°**8**55'11 conjunction -3264 Apr 19 j 13:39 2°\bar{`23'19} 0°-33'-52 opposition -3257 Nov 22 j 11:41 5°**8**52'49 0°-10'-38 -3264 Apr 19 j 13:39 minimum elong 2°**Y**23'19 0°33'53 min. Earth dist. -3257 Nov 23 j 08:05 5°**8**50'36 17.70931 AU -3264 Apr 19 j 02:03 2°**Υ**21'37 20.20220 AU -3256 Feb 05 j 17:00 3°**8**48'23 max. Earth dist. direct -3264 Aug 08 j 05:27 -3256 May 26 j 01:38 retrograde 6°**Y**37′03 max. Earth dist. 8°**8**07'05 19.68152 AU -3264 Oct 22 j 04:18 opposition 4°**Υ**35'25 0°-36'-7 min. Earth dist. -3264 Oct 22 j 14:12 4°**Υ**34'22 18.16715 AU conjunction -3256 May 27 j 03:26 8°**8**11'01 0°-7'-43 direct -3263 Jan 04 j 22:07 2°Y33'45 minimum elong -3256 May 27 j 03:25 8°**8**11'00 0°07'40 behind sun begin -3256 May 26 j 21:18 8°810'06 conjunction -3263 Apr 24 j 09:45 6°**Y**45'39 0°-31'-11 behind sun end -3256 May 27 j 09:32 8°811'55 minimum elong -3263 Apr 24 j 09:45 6°**Y**45'39 0°31'11 retrograde -3256 Sep 13 j 11:41 12°\(\mathbf{2}\)30'39 max. Earth dist. -3263 Apr 23 j 20:08 6°Υ43'38 20.13215 AU opposition -3256 Nov 26 j 05:32 10°**8**28'17 0°-6'-26 retrograde -3263 Aug 12 j 21:49 11°Y00'10 min. Earth dist. -3256 Nov 27 j 02:52 10°\(25'58\) 17.65474 AU opposition -3263 Oct 26 j 17:02 8°**Υ**'58'23 0°-33'-2 direct -3255 Feb 09 i 13:50 8°**8**23'34 min. Earth dist. -3263 Oct 27 i 05:37 8°**Y**57'02 18.09703 AU max. Earth dist. -3255 May 31 j 03:26 12°843'41 19.62838 AU direct -3262 Jan 09 j 11:23 6°Y56'16 conjunction -3255 Jun 01 i 05:17 12°**8**47'38 0°-3'-55 -3262 Apr 29 j 06:44 11°**Υ**'09'42 0°-28'-17 -3255 Jun 01 j 05:17 12°**8**47'38 0°03'52 conjunction minimum elong -3262 Apr 29 j 06:44 11°**Υ**'09'42 0°28'17 -3255 May 31 j 22:34 12°**8**46'38 behind sun begin minimum elong -3262 Apr 28 j 14:41 11°**Υ**07'19 20.06223 AU behind sun end -3255 Jun 01 j 11:59 12°848'38 max. Earth dist. -3262 Aug 17 j 15:57 15°**Υ**25'00 -3255 Jul 08 j 20:21 15°**8** retrograde -3262 Oct 31 j 06:10 13°**Y**'23'03 0°-29'-44 retrograde -3255 Sep 18 j 09:09 17°**8**07'53 opposition -3262 Oct 31 j 19:41 13°**Y**21'36 18.02740 AU -3255 Dec 01 j 00:19 15°805'34 0°-2'-10 opposition min. Earth dist. -3261 Jan 14 j 02:48 11°**Υ**20'28 -3255 Dec 01 j 22:49 15°803'06 17.60305 AU min. Earth dist. direct -3261 May 03 j 11:03 15°**Y**32'52 19.99297 AU -3255 Dec 03 j 03:18 15°R₩ max. Earth dist. -3254 Feb 14 j 10:53 13°**8**00'35 direct -3261 May 04 j 04:32 15°**Υ**35'28 0°-25'-13 -3254 Apr 25 j 11:16 15°**8** conjunction -3261 May 04 j 04:32 15° Υ 35'28 0° 25'12 -3254 Jun 05 j 03:23 17°**8**21'40 19.57814 AU max. Earth dist. minimum elong -3261 Aug 22 j 09:43 19°**Υ**51'31 retrograde opposition -3261 Nov 04 j 20:16 17°**Y**49'27 0°-26'-14 conjunction -3254 Jun 06 j 07:42 17°**8**26'00 0°00'00 min. Earth dist. -3261 Nov 05 j 12:00 17°**Y**47'45 17.95887 AU minimum elong -3254 Jun 06 j 07:41 17°**8**26'00 0°00'06 -3254 Jun 06 j 01:09 17°**8**25'02 direct -3260 Jan 18 j 17:42 15° **Y** 46'26 behind sun begin max. Earth dist. -3260 May 07 j 06:55 20°**Y**00'00 19.92536 AU behind sun end -3254 Jun 06 j 14:13 17°**8**26'59 asc. node -3254 Jun 06 j 09:41 17°**8**26'14 -3260 May 08 j 02:44 20° \cdot 02'58 0°-21'-59 -3254 Sep 23 j 06:46 21°846'50 conjunction retrograde -3260 May 08 j 02:44 20°**Υ**'02'58 -3254 Dec 05 j 19:52 19°844'31 0°02'09 minimum elong opposition -3260 Aug 26 j 04:33 24°**Y**19'47 min. Earth dist. -3254 Dec 06 j 19:35 19°841'56 17.55438 AU retrograde -3260 Nov 08 i 10:56 22°**Υ**'17'35 0°-22'-33 -3253 Feb 19 i 09:32 17°**8**39'16 opposition direct -3260 Nov 09 j 03:22 22° γ 15'48 17.89235 AU -3253 Jun 10 j 06:26 22°801'37 19.53082 AU min. Earth dist. max. Earth dist. -3259 Jan 22 j 10:39 20° Υ 14'08 direct -3259 May 12 j 05:18 24° Υ 29'08 19.85991 AU -3253 Jun 11 j 10:43 22°805'59 0°03'58 max. Earth dist. conjunction minimum elong -3253 Jun 11 i 10:43 22°805'59 0°04'03 -3259 May 13 i 01:55 24°**Υ**'32'14 0°-18'-36 behind sun begin -3253 Jun 11 j 04:02 22°**8**04'58 conjunction $-3259 \text{ May } 13 \text{ i } 01:55 \quad 24^{\circ} \Upsilon 32'14$ 0°18'34 behind sun end -3253 Jun 11 j 17:24 22°**8**06'59 minimum elong -3259 Aug 30 j 23:29 28°**Y**49'47 retrograde -3253 Sep 28 j 05:38 26°827'18 retrograde -3259 Nov 13 j 02:22 26°**Y**47'29 0°-18'-43 -3253 Dec 10 j 16:19 24°825'01 opposition opposition 0°06'29 -3259 Nov 13 j 20:35 26°**Y**45'30 17.82828 AU min. Earth dist. min. Earth dist. -3253 Dec 11 j 16:39 24°822'21 17.50853 AU -3258 Jan 27 j 03:22 24°**Y**43'41 direct direct -3252 Feb 24 j 08:52 22°**8**19'31 max. Earth dist. -3258 May 17 j 02:39 28°**Y**59'49 19.79734 AU max. Earth dist. -3252 Jun 14 j 07:32 26°**8**42'41 19.48651 AU -3258 May 18 j 01:43 29° Υ 03'18 0°-15'-5 -3252 Jun 15 j 13:47 26°847'22 0°07'50 conjunction conjunction -3258 May 18 j 01:43 29°**Y**03'18 0°15'03 -3252 Jun 15 j 13:47 26°**8**47'22 0°07'55 minimum elong minimum elong -3258 May 17 j 23:41 29°**Y**03'00 -3252 Jun 15 j 07:44 26°**8**46'27 behind sun begin behind sun begin behind sun end -3258 May 18 j 03:45 29° Υ 03'36 behind sun end -3252 Jun 15 j 19:49 26°**8**48'16 -3258 Jun 02 j 19:14 0° 8 -3252 Aug 12 j 08:18 Π °0 retrograde -3258 Sep 04 j 18:58 3°**8**21'35 retrograde -3252 Oct 02 j 03:51 1°**Ⅲ**09'08 opposition -3258 Nov 17 j 18:36 1°**8**19'13 0°-14'-44 -3252 Nov 23 j 14:10 30°R**8** min. Earth dist. -3258 Nov 18 j 13:33 1°817'10 17.76727 AU -3252 Dec 14 j 13:31 29°806'50 0°10'47 opposition

min. Earth dist.

-3252 Dec 15 j 15:03 29°804'03 17.46598 AU

-3258 Dec 20 j 17:50 30°R℃

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Attention, astronomical year style is used: The year -3251 in astronomical counting style is the year 3252 BCE in historical counting style.

direct -3251 Feb 28 j 08:40 27°801'05 retrograde -3244 Nov 09 j 01:28 9°\$11'18

		-	in astronomical co		3252 BCE in historical of		•
direct	-3251 Feb 28 j 08:40			retrograde	-3244 Nov 09 j 01:28	9° © 11'18	
	-3251 May 27 j 02:46	Π °0		opposition	-3243 Jan 21 j 11:36	7° © 09'15	0°40'38
max. Earth dist.	-3251 Jun 19 j 11:22	1° Ⅱ 25′20	19.44564 AU	min. Earth dist.	-3243 Jan 22 j 11:25	7° © 06′39	17.29985 AU
				direct	-3243 Apr 08 j 03:01	5° © 02'37	
conjunction	-3251 Jun 20 j 17:25	1° Ⅱ 29'59	0°11'40				
minimum elong	-3251 Jun 20 j 17:25	1° Ⅱ 29'59	0°11'45	conjunction	-3243 Jul 29 j 20:28	9° © 35'20	0°37'43
behind sun begin	-3251 Jun 20 j 12:44	1° Ⅱ 29'17		minimum elong	-3243 Jul 29 j 20:28	9° 5 35'20	0°37'49
behind sun end	-3251 Jun 20 j 22:06	1° Ⅲ 30'42		max. Earth dist.	-3243 Jul 28 j 18:02	9°531'10	19.30219 AU
retrograde	-3251 Oct 07 j 03:50	5° Ⅱ 52'07		retrograde	-3243 Nov 14 j 02:35	13° 9 57'56	
opposition	-3251 Dec 19 j 11:12	3° Ⅱ 49'49	0°15'03	opposition	-3242 Jan 26 j 13:11	11°956'02	0°43'23
min. Earth dist.	-3251 Dec 20 j 12:48	3°∏47'01	17.42689 AU	min. Earth dist.	-3242 Jan 27 j 11:06	11°\$53'39	17.30689 AU
direct	-3250 Mar 05 j 09:59	1° Ⅱ 43'49		direct	-3242 Apr 13 j 08:49	9°549'32	
	5200 Mar 00 J 05.05				52.211p1 15 j 00.15	, 0 ., 52	
conjunction	-3250 Jun 25 j 21:11	6° Ⅱ 13'40	0°15'26	conjunction	-3242 Aug 03 j 22:53	1.406222108	0°40'02
minimum elong	-3250 Jun 25 j 21:11	6° Ⅱ 13'40	0°15'31	minimum elong	• •	14°922'08	0°40'09
behind sun begin	-3250 Jun 25 j 19:49	6° Ⅱ 13'28	0 13 31	max. Earth dist.	-3242 Aug 02 j 22:52		
C	,	6° П 13'53			C 3		19.31222 AU
behind sun end	-3250 Jun 25 j 22:33		10 10051 177	retrograde	-3242 Nov 19 j 01:20		0045140
max. Earth dist.	-3250 Jun 24 j 13:54		19.40851 AU	opposition	-3241 Jan 31 j 15:27		0°45'49
retrograde	-3250 Oct 12 j 02:18	10° Ⅱ 36′06		min. Earth dist.	-3241 Feb 01 j 13:02		17.31976 AU
opposition	-3250 Dec 24 j 09:44	8° Ⅱ 33'47		direct	-3241 Apr 18 j 12:20		
min. Earth dist.	-3250 Dec 25 j 12:27		17.39201 AU	max. Earth dist.	-3241 Aug 08 j 00:56	19° © 05'00	19.32789 AU
direct	-3249 Mar 10 j 10:21	6° Ⅱ 27'33					
max. Earth dist.	-3249 Jun 29 j 18:06	10° Ⅱ 53'24	19.37588 AU	conjunction	-3241 Aug 09 j 00:32	19° 5 08'44	0°42'05
				minimum elong	-3241 Aug 09 j 00:31	19° 5 08'44	0°42'12
conjunction	-3249 Jul 01 j 00:55	10° Ⅲ 58'13	0°19'06	retrograde	-3241 Nov 24 j 02:00	23°530'50	
minimum elong	-3249 Jul 01 j 00:55	10° Ⅱ 58'13	0°19'13	opposition	-3240 Feb 05 j 17:46	21° 5 29'14	0°47'56
retrograde	-3249 Oct 17 j 03:27	15° Ⅱ 20'52		min. Earth dist.	-3240 Feb 06 j 13:28	21° © 27'07	17.33806 AU
opposition	-3249 Dec 29 j 08:45		0°23'15	direct	-3240 Apr 22 j 17:20	19° © 23'06	
min. Earth dist.	-3249 Dec 30 j 10:45			max. Earth dist.	-3240 Aug 12 j 05:01		19.34862 AU
direct	-3248 Mar 14 j 13:20		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
max. Earth dist.	-3248 Jul 03 j 21:45		19 3//816 ΔΙΙ	conjunction	-3240 Aug 13 j 01:58	23°0551'57	0°43'50
max. Lartii dist.	-3246 Jul 03 j 21.43	13 113030	17.54010 AC	minimum elong	-3240 Aug 13 j 01:58		0°43'56
agniumation	-3248 Jul 05 j 04:39	150T 42120	0°22'40	· ·			0 43 30
conjunction	•			retrograde	-3240 Nov 28 j 01:20		0040142
minimum elong	-3248 Jul 05 j 04:39		0°22'46	opposition	-3239 Feb 09 j 20:13		0°49'43
retrograde	-3248 Oct 21 j 01:49			min. Earth dist.	-3239 Feb 10 j 15:12		17.36109 AU
opposition	-3247 Jan 02 j 08:20			direct	-3239 Apr 27 j 20:57		
min. Earth dist.	-3247 Jan 03 j 11:08		17.33690 AU	max. Earth dist.	-3239 Aug 17 j 06:09	28°537'17	19.37395 AU
direct	-3247 Mar 19 j 13:55						
max. Earth dist.	-3247 Jul 09 j 01:52	20° Ⅱ 24'28	19.32619 AU	conjunction	-3239 Aug 18 j 02:43	28° © 40'32	0°45'17
				minimum elong	-3239 Aug 18 j 02:43	28° © 40'32	0°45'23
conjunction	-3247 Jul 10 j 08:16	20° Ⅱ 29'14	0°26'04		-3239 Sep 08 j 08:05	0 $^{\circ}\Omega$	
minimum elong	-3247 Jul 10 j 08:16	20° Ⅱ 29'14	0°26'11	retrograde	-3239 Dec 03 j 01:30	3° Ω 01'48	
retrograde	-3247 Oct 26 j 03:27	24° Ⅱ 52'06		opposition	-3238 Feb 14 j 22:47	1° Ω 00′29	0°51'09
opposition	-3246 Jan 07 j 08:23	22° Ⅱ 49'48	0°30'51	min. Earth dist.	-3238 Feb 15 j 16:04	0° Ω 58'38	17.38860 AU
min. Earth dist.	-3246 Jan 08 j 09:49	22° Ⅱ 47'01	17.31785 AU		-3238 Mar 11 j 12:21	30° ₹ 5	
direct	-3246 Mar 24 j 17:57			direct	-3238 May 03 j 00:43	28° © 54'45	
max. Earth dist.	-3246 Jul 14 j 06:23	25° Ⅱ 10'47	19.31018 AU		-3238 Jun 22 j 16:13	$0^{\circ}\Omega$	
	J			max. Earth dist.	-3238 Aug 22 j 09:01		19.40351 AU
conjunction	-3246 Jul 15 j 11:46	25°∏15'25	0°29'18				
minimum elong	-3246 Jul 15 j 11:46			conjunction	-3238 Aug 23 j 02:50	3° Ω 25'16	0°46'25
retrograde	-3246 Oct 31 j 01:48		0 2) 23	minimum elong	-3238 Aug 23 j 02:50	3° Ω 25'16	0°46'31
•	-3245 Jan 12 j 09:05		0924121	retrograde	C 3	7° Ω 45'59	0 4031
opposition				-	-3238 Dec 08 j 00:52		0°52'14
min. Earth dist.	-3245 Jan 13 j 10:50		17.30516 AU	opposition	-3237 Feb 20 j 01:25	5° Ω 44'47	
direct	-3245 Mar 29 j 19:27			min. Earth dist.	-3237 Feb 20 j 17:17		17.42006 AU
max. Earth dist.	-3245 Jul 19 j 10:08	29° Ц 57'20	19.30087 AU	direct	-3237 May 08 j 04:40	3° Ω 39'18	
		_		max. Earth dist.	-3237 Aug 27 j 09:10	8° 81 06'13	19.43704 AU
conjunction	-3245 Jul 20 j 14:57	0° © 01'52					
minimum elong	-3245 Jul 20 j 14:57	0°901'52	0°32'26	conjunction	-3237 Aug 28 j 02:09	8° Ω 08'54	0°47'14
	-3245 Jul 20 j 03:02	0 \circ \odot		minimum elong	-3237 Aug 28 j 02:09	8° Ω 08'54	0°47'19
retrograde	-3245 Nov 05 j 03:14	4°524'44		retrograde	-3237 Dec 12 j 23:49	12° Ω 29′03	
opposition	-3244 Jan 17 j 10:05	2° © 22'32	0°37'37	opposition	-3236 Feb 25 j 03:49	10° Ω 27'56	0°52'57
min. Earth dist.	-3244 Jan 18 j 09:55	2°519'57	17.29919 AU	min. Earth dist.	-3236 Feb 25 j 18:07	10° Ω 26′24	17.45561 AU
direct	-3244 Apr 03 j 00:36	0°915'49		direct	-3236 May 12 j 07:43	8° £ 22'39	
	• •			max. Earth dist.	-3236 Aug 31 j 10:27		19.47453 AU
conjunction	-3244 Jul 24 i 17:52	4°5548'33	0°35'08		Z J		
conjunction minimum elong	-3244 Jul 24 j 17:52 -3244 Jul 24 j 17:52						
conjunction minimum elong max. Earth dist.	-3244 Jul 24 j 17:52 -3244 Jul 24 j 17:52 -3244 Jul 23 j 15:00	4°গু48'33	0°35'08 0°35'15 19.29822 AU	conjunction minimum elong	-3236 Sep 01 j 00:42 -3236 Sep 01 j 00:42	12° Ω 51'14	0°47'43

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		10 Mar 2726		nting style is the year	2227 DCE in historical a	ounting style	
Attention, astronom	-3236 Oct 06 j 12:30		in astronomicai cou	conjunction	-3228 Oct 07 j 04:15		
retrograde	-3236 Dec 16 j 22:15			minimum elong	-3228 Oct 07 j 04:15	-	0°40'44
opposition	-3235 Mar 01 j 05:57		0°53'18	max. Earth dist.	-3228 Oct 07 j 04:15		19.91265 AU
min. Earth dist.	-3235 Mar 01 j 18:14			retrograde	-3227 Jan 22 j 10:52		17.71203 110
min. Bartii digt.	-3235 Mar 05 j 01:14		17.15.100.110	opposition	-3227 Apr 08 j 07:49		0°44'07
direct	-3235 May 17 j 11:43			min. Earth dist.	-3227 Apr 08 j 02:00	-	17.94610 AU
	-3235 Jul 25 j 02:26			direct	-3227 Jun 24 j 14:56	-	
						., .,	
conjunction	-3235 Sep 05 j 22:18	17° Ω 32'05	0°47'53	conjunction	-3227 Oct 11 j 18:53	23° m 57'49	0°38'38
minimum elong	-3235 Sep 05 j 22:18			minimum elong	-3227 Oct 11 j 18:53	23° m 57'49	0°38'39
max. Earth dist.	-3235 Sep 05 j 09:26	17° Ω 30′04	19.51574 AU	max. Earth dist.	-3227 Oct 12 j 01:27	23° m 58'49	19.97989 AU
retrograde	-3235 Dec 21 j 19:33	21° Ω 50'54		retrograde	-3226 Jan 27 j 03:01	28° mp 10'35	
opposition	-3234 Mar 06 j 07:48	19° Ω 49'53	0°53'18	opposition	-3226 Apr 13 j 05:46	26° № 10'33	0°41'40
min. Earth dist.	-3234 Mar 06 j 18:36	19° Ω 48'45	17.53807 AU	min. Earth dist.	-3226 Apr 12 j 23:01	26° TQ 11'15	18.01373 AU
direct	-3234 May 22 j 13:58	17° Ω 45′06		direct	-3226 Jun 29 j 10:07	24°Mp08'59	
conjunction	-3234 Sep 10 j 19:03		0°47'44	conjunction	-3226 Oct 16 j 08:44	28° Mp 23'27	0°36'20
minimum elong	-3234 Sep 10 j 19:03		0°47'48	minimum elong	-3226 Oct 16 j 08:44	28° TD 23'27	0°36'20
max. Earth dist.	-3234 Sep 10 j 08:57		19.56104 AU	max. Earth dist.	-3226 Oct 16 j 16:33		20.04778 AU
retrograde	-3234 Dec 26 j 16:47				-3226 Nov 12 j 05:54	0∘ ⊽	
opposition	-3233 Mar 11 j 09:19			retrograde	-3225 Jan 31 j 21:00	2° ≏ 35'27	
min. Earth dist.	-3233 Mar 11 j 17:19		17.58528 AU	opposition	-3225 Apr 18 j 02:54	0° ჲ 35'33	
direct	-3233 May 27 j 17:28	22° Ω 23'55		min. Earth dist.	-3225 Apr 17 j 17:16		18.08162 AU
					-3225 May 02 j 19:13	30°R Mp	
conjunction	-3233 Sep 15 j 14:41	26° Ω 48'46		direct	-3225 Jul 04 j 06:42	28° m/34'25	
minimum elong	-3233 Sep 15 j 14:41	26° Ω 48'46	0°47'19		-3225 Sep 01 j 01:33	0∘ ⊽	
max. Earth dist.	-3233 Sep 15 j 06:44		19.61035 AU		2225 0 4 20 : 21 52	20 0 47120	0022150
	-3233 Nov 11 j 16:18	0°M)		conjunction	-3225 Oct 20 j 21:52	2° Ω 47'20	0°33'50
retrograde	-3233 Dec 31 j 12:39	1° Mp 06'07		minimum elong	-3225 Oct 20 j 21:52	2° Ω 47'20	0°33'49
	-3232 Feb 21 j 21:27	30°RN 29°N05'13	0052115	max. Earth dist.	-3225 Oct 21 j 08:21	2° ± 48′56 6° £ 58′33	20.11542 AU
opposition min. Earth dist.	-3232 Mar 15 j 10:26 -3232 Mar 15 j 16:53		17.63676 AU	retrograde opposition	-3224 Feb 05 j 12:18 -3224 Apr 21 j 23:29	6° ± 38′33 4° £ 58'46	0026105
direct	-3232 May 31 j 18:10	29° Ω 04'32	17.03070 AU	min. Earth dist.	-3224 Apr 21 j 23:29 -3224 Apr 21 j 13:05		18.14895 AU
direct	-3232 May 31 j 18.10 -3232 Aug 27 j 11:32	0°m		direct	-3224 Apr 21 j 13:03	2° £ 58'03	10.14093 AU
	-3232 Aug 27 j 11.32	עווי		direct	-3224 Jul 08 J 00.32	2 = 38 03	
conjunction	-3232 Sep 19 i 09:34	1° m 24'30	0°46'30	conjunction	-3224 Oct 24 j 10:12	7° ≏ 09'24	0°31'09
minimum elong	-3232 Sep 19 j 09:34	1° m 24'30	0°46'33	minimum elong	-3224 Oct 24 j 10:12		0°31'09
max. Earth dist.	-3232 Sep 19 j 04:11	•	19.66396 AU	max. Earth dist.	-3224 Oct 24 j 21:29		20.18231 AU
retrograde	-3231 Jan 04 j 08:50	5° m) 41'04		retrograde	3	11° ≏ 19'50	
•				renograde	-3223 FCU U9 U4.41	11 == 19 30	
opposition	•	3° m/40'16	0°51'13	•		9° £ 20'07	0°33'00
opposition min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01	~	0°51'13 17.69227 AU	opposition min. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10		0°33'00 18.21527 AU
	-3231 Mar 20 j 10:47	~		opposition	-3223 Apr 26 j 19:05	9° ჲ 20'07	
min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01	3°m/39'55		opposition min. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10	9° ჲ 20'07 9° ჲ 21'26	
min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01	3°m/39'55		opposition min. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10	9° 요 20'07 9° 요 21'26 7° 요 19'46	
min. Earth dist. direct	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09	3°m 39'55 1°m 36'27	17.69227 AU	opposition min. Earth dist. direct	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53	9° 요 20'07 9° 요 21'26 7° 요 19'46	18.21527 AU
min. Earth dist. direct	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'29	17.69227 AU 0°45'27	opposition min. Earth dist. direct conjunction	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53	9° £ 20'07 9° £ 21'26 7° £ 19'46 11° £ 29'35 11° £ 29'35	18.21527 AU 0°28'19 0°28'17
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24	3° My 39'55 1° My 36'27 5° My 58'29 5° My 58'29 5° My 58'03 10° My 14'18	17.69227 AU 0°45'27 0°45'30 19.72144 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03	9° \(\Omega\)20'07 9° \(\Omega\)21'26 7° \(\Omega\)19'46 11° \(\Omega\)29'35 11° \(\Omega\)29'35 11° \(\Omega\)31'41 15° \(\Omega\)39'13	18.21527 AU 0°28'19 0°28'17 20.24795 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13	9° \(\Omega\)20'07 9° \(\Omega\)21'26 7° \(\Omega\)19'46 11° \(\Omega\)29'35 11° \(\Omega\)29'35 11° \(\Omega\)31'41 15° \(\Omega\)39'13 13° \(\Omega\)39'34	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37 8° m/13'26	17.69227 AU 0°45'27 0°45'30 19.72144 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27	9° \(\Omega\)20'07 9° \(\Omega\)21'26 7° \(\Omega\)19'46 11° \(\Omega\)29'35 11° \(\Omega\)39'35 11° \(\Omega\)39'13 13° \(\Omega\)39'34 13° \(\Omega\)40'58	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13	9° \(\Omega\)20'07 9° \(\Omega\)21'26 7° \(\Omega\)19'46 11° \(\Omega\)29'35 11° \(\Omega\)39'35 11° \(\Omega\)39'13 13° \(\Omega\)39'34 13° \(\Omega\)40'58	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37 8° m/13'26 6° m/10'13	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 13° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37 8° m/13'26 6° m/10'13	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34	3° m/39'55 1° m/36'27 5° m/58'29 5° m/58'29 5° m/58'03 10° m/14'18 8° m/13'37 8° m/13'26 6° m/10'13 10° m/30'48 10° m/30'48	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'42	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 23:12	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 50'00 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'42 14° m 45'51	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:35	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 50'00 \) 19° \(\Omega 56'40 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'48 10° m 30'42 14° m 45'51 12° m 45'20	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU 0°48'15	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3221 Feb 18 j 09:50 -3221 May 06 j 08:24	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 50'00 \) 19° \(\Omega 56'40 \) 17° \(\Omega 57'01 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30 -3229 Mar 30 j 08:56	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'42 14° m 45'51 12° m 45'20 12° m 45'30	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 23:12 -3221 Feb 18 j 09:50 -3221 May 06 j 08:24 -3221 May 05 j 16:19	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 45'000 \) 19° \(\Omega 56'40 \) 17° \(\Omega 57'01 \) 17° \(\Omega 58'39 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'48 10° m 30'42 14° m 45'51 12° m 45'20	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU 0°48'15	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3221 Feb 18 j 09:50 -3221 May 06 j 08:24	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 45'000 \) 19° \(\Omega 56'40 \) 17° \(\Omega 57'01 \) 17° \(\Omega 58'39 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30 -3229 Mar 30 j 08:56 -3229 Jun 15 j 19:34	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'42 14° m 45'51 12° m 45'20 12° m 45'30 10° m 42'22	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU 0°48'15 17.81422 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Nov 02 j 08:33 -3222 Peb 18 j 09:50 -3221 Feb 18 j 09:50 -3221 May 06 j 08:24 -3221 May 05 j 16:19 -3221 Jul 22 j 05:54	9° \(\Omega 20'07 \) 9° \(\Omega 21'26 \) 7° \(\Omega 19'46 \) 11° \(\Omega 29'35 \) 11° \(\Omega 29'35 \) 11° \(\Omega 31'41 \) 15° \(\Omega 39'34 \) 13° \(\Omega 40'58 \) 11° \(\Omega 39'34 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 47'47 \) 15° \(\Omega 50'00 \) 19° \(\Omega 56'40 \) 17° \(\Omega 58'39 \) 15° \(\Omega 57'20 \)	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21 18.34392 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30 -3229 Mar 30 j 08:56 -3229 Jun 15 j 19:34 -3229 Oct 03 j 12:51	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'48 10° m 30'42 14° m 45'51 12° m 45'20 12° m 45'30 10° m 42'22 15° m 01'27	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'08 0°44'10 19.78261 AU 0°48'15 17.81422 AU	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3221 Nov 02 j 08:44 -3221 May 06 j 08:24 -3221 May 06 j 08:54 -3221 Nov 06 j 18:40	9° \(\Omega \) 20'07 9° \(\Omega \) 21'26 7° \(\Omega \) 19'46 11° \(\Omega \) 29'35 11° \(\Omega \) 31'41 15° \(\Omega \) 39'34 13° \(\Omega \) 40'58 11° \(\Omega \) 39'34 15° \(\Omega \) 47'47 15° \(\Omega \) 47'47 15° \(\Omega \) 50'00 19° \(\Omega \) 56'40 17° \(\Omega \) 57'01 17° \(\Omega \) 57'20 20° \(\Omega \) 04'02	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21 18.34392 AU 0°22'14
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min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-3231 Mar 20 j 10:47 -3231 Mar 20 j 14:01 -3231 Jun 05 j 20:09 -3231 Sep 24 j 03:35 -3231 Sep 24 j 00:42 -3230 Jan 09 j 03:24 -3230 Mar 25 j 10:59 -3230 Mar 25 j 12:47 -3230 Jun 10 j 19:16 -3230 Sep 28 j 20:34 -3230 Sep 28 j 20:34 -3230 Sep 28 j 19:58 -3229 Jan 13 j 22:50 -3229 Mar 30 j 10:30 -3229 Mar 30 j 08:56 -3229 Jun 15 j 19:34 -3229 Oct 03 j 12:51 -3229 Oct 03 j 12:52 -3229 Oct 03 j 15:00 -3228 Jan 18 j 16:11 -3228 Apr 03 j 09:29	3° m 39'55 1° m 36'27 5° m 58'29 5° m 58'29 5° m 58'03 10° m 14'18 8° m 13'37 8° m 13'26 6° m 10'13 10° m 30'48 10° m 30'48 10° m 30'48 10° m 30'48 10° m 45'51 12° m 45'51 12° m 45'20 12° m 45'30 10° m 42'22 15° m 01'27 15° m 01'47 19° m 15'45 17° m 15'40	17.69227 AU 0°45'27 0°45'30 19.72144 AU 0°49'53 17.75164 AU 0°44'10 19.78261 AU 0°48'15 17.81422 AU 0°42'33 0°42'35 19.84654 AU 0°46'19	opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct	-3223 Apr 26 j 19:05 -3223 Apr 26 j 06:10 -3223 Jul 12 j 19:37 -3223 Oct 28 j 21:53 -3223 Oct 28 j 21:53 -3223 Oct 29 j 11:47 -3222 Feb 13 j 19:03 -3222 May 01 j 14:13 -3222 May 01 j 00:27 -3222 Jul 17 j 12:46 -3222 Nov 02 j 08:33 -3221 Nov 06 j 08:24 -3221 May 05 j 16:19 -3221 Jul 22 j 05:54 -3221 Nov 06 j 18:40 -3221 Nov 06 j 18:40 -3221 Nov 07 j 12:01 -3220 Feb 22 j 22:36 -3220 May 09 j 08:35	9° £20'07 9° £21'26 7° £19'46 11° £29'35 11° £29'35 11° £39'13 13° £39'34 13° £40'58 11° £39'34 15° £47'47 15° £47'47 15° £47'47 15° £50'00 19° £56'40 17° £57'01 17° £58'39 15° £57'20 20° £04'02 20° £06'38 24° £12'07 22° £14'12 22° £14'12 22° £12'28	18.21527 AU 0°28'19 0°28'17 20.24795 AU 0°29'45 18.28023 AU 0°25'20 0°25'19 20.31230 AU 0°26'21 18.34392 AU 0°22'14 0°22'11 20.37527 AU 18.40630 AU

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3220 in astronomical counting style is the year 3221 BCE in historical counting style. -3220 Nov 10 i 03:54 24° **2**18'18 0°19'02 behind sun begin -3214 Dec 04 i 17:19 19° ML09'00 conjunction -3220 Nov 10 j 03:54 24° **2**18'18 0°18'59 behind sun end -3214 Dec 05 j 06:24 19°M 10'52 minimum elong -3220 Nov 10 j 21:54 24° **2**21'00 20.43716 AU -3214 Dec 06 j 02:07 19° ML 13'47 20.78162 AU max. Earth dist. max. Earth dist. -3213 Mar 24 j 06:36 23°M 13'52 -3219 Feb 26 j 11:47 28° **2**25'40 retrograde retrograde -3213 Jun 09 j 03:38 21° ML 17'13 18.80683 AU -3219 May 14 j 18:10 26°**£**26'01 opposition 0°19'15 min. Earth dist. min. Earth dist. -3219 May 13 j 22:55 26°**2**27'57 18.46778 AU opposition -3213 Jun 10 j 06:00 21°ML14'35 0°-3'-16 direct -3219 Jul 30 j 12:51 24°**£**26'56 direct -3213 Aug 25 j 11:39 19°M 17'25 -3213 Dec 09 j 06:05 23°ML14'13 0°-4'-41 conjunction -3219 Nov 14 j 12:29 28°**△**30'43 0°15'46 conjunction minimum elong -3219 Nov 14 j 12:29 28°**△**30'43 0°15'43 minimum elong -3213 Dec 09 j 06:05 23°ML14'13 0°04'47 behind sun begin -3219 Nov 14 j 10:42 28°**♀**30'27 behind sun begin -3213 Dec 08 j 23:41 23°ML13'18 -3219 Nov 14 j 14:16 28°**△**30'58 -3213 Dec 09 j 12:28 23°ML15'07 behind sun end behind sun end -3213 Dec 10 j 10:06 23°ML18'18 20.83060 AU max. Earth dist. -3219 Nov 15 j 09:17 28°**೨**33'49 20.49806 AU max. Earth dist. -3219 Dec 10 j 00:04 0°M retrograde -3212 Mar 27 j 15:33 27° ML17'44 retrograde -3218 Mar 02 j 23:15 2°M37'22 opposition -3212 Jun 13 j 17:31 25°M 18'31 0°-7'00 opposition -3218 May 19 j 09:59 0°**IL**37'44 0°15'35 min. Earth dist. -3212 Jun 12 j 14:38 25°ML21'12 18.85386 AU min. Earth dist. -3218 May 18 j 13:28 0°**™**39'49 18.52824 AU direct -3212 Aug 28 j 21:32 23°M21'38 -3218 Jun 04 j 06:49 30°R <u>Ω</u> direct -3218 Aug 04 j 03:32 28°**£**38'59 conjunction -3212 Dec 12 j 11:53 27° ML17'32 -3218 Sep 30 j 10:39 minimum elong -3212 Dec 12 j 11:53 27° ML17'32 0°08'08 behind sun begin -3212 Dec 12 j 06:03 27° ML 16'43 conjunction -3218 Nov 18 j 20:27 2°M41'23 0°12'26 behind sun end -3212 Dec 12 j 17:44 27° ML 18'22 minimum elong -3218 Nov 18 j 20:27 2°M41'23 0°12'23 max. Earth dist. -3212 Dec 13 j 15:18 27° M21'32 20.87556 AU behind sun begin -3218 Nov 18 j 16:04 2°M40'45 -3211 Feb 01 i 09:15 0°**∡**¹ behind sun end -3218 Nov 19 j 00:50 2°M42'01 retrograde -3211 Apr 01 j 01:43 1°×20'42 max. Earth dist. -3218 Nov 19 j 17:47 2°M44'33 20.55808 AU -3211 Jun 01 j 20:28 30°RM -3217 Mar 07 j 11:28 min. Earth dist. -3211 Jun 17 j 01:45 29° ML 24'14 18.89671 AU retrograde 6°M-47'25 -3217 May 23 j 02:33 4° ነቤ50'03 18.58782 AU -3211 Jun 18 j 04:44 29°M21'33 0°-10'-42 min. Earth dist. opposition opposition -3211 Sep 02 j 05:25 27°M24'53 -3217 May 24 j 00:55 4°M.47'48 0°11'51 direct 2°M49'22 -3211 Nov 23 j 08:35 -3217 Aug 08 j 15:56 direct 0°×7 6°M50'30 0°09'04 -3217 Nov 23 j 04:02 -3211 Dec 16 j 17:34 conjunction conjunction 1°**х** 19'59 0°-11'-20 -3211 Dec 16 j 17:34 -3217 Nov 23 j 04:02 6°M50'30 0°09'01 1°**∡**19'59 0°11'27 minimum elong minimum elong -3211 Dec 16 j 12:46 -3217 Nov 22 j 22:25 behind sun begin 6°**™**49'41 behind sun begin 1°**∡**19'18 -3217 Nov 23 j 09:38 -3211 Dec 16 j 22:22 behind sun end 6°ML51'18 behind sun end 1°**х** 20′39 -3217 Nov 24 j 03:54 -3211 Dec 17 j 22:23 max. Earth dist. 6°ML54'02 20.61693 AU max. Earth dist. 1°**∡**′24′10 20.91596 AU -3210 Apr 05 j 10:33 retrograde -3216 Mar 10 j 21:59 10°M 55'55 retrograde 5°**х** 22′48 opposition -3216 May 27 j 15:08 8°M56'23 0°08'05 min. Earth dist. -3210 Jun 21 j 11:59 3°**尽**26'24 18.93465 AU min. Earth dist. -3216 May 26 j 15:40 8°M58'44 18.64589 AU opposition -3210 Jun 22 j 15:20 3°**₹**23'40 0°-14'-20 direct -3216 Aug 12 j 04:44 6°M58'16 direct -3210 Sep 06 j 14:32 1°**х¹**27'12 -3216 Nov 26 j 10:56 10°M58'12 0°05'41 -3210 Dec 20 j 23:03 5°**₹**21'32 0°-14'-34 conjunction conjunction -3216 Nov 26 j 10:56 10°M 58'12 -3210 Dec 20 j 23:03 5°**∡**21'32 0°14'40 minimum elong minimum elong -3216 Nov 26 j 04:39 10°M 57'17 behind sun begin -3210 Dec 20 j 20:10 5°**∡**121'08 behind sun begin -3216 Nov 26 j 17:13 10°M 59'06 behind sun end -3210 Dec 21 j 01:56 5°**∡**121'57 behind sun end -3216 Nov 27 j 11:02 11° ML01'45 20.67414 AU 5°**х** 25'34 20.95143 AU max. Earth dist. max. Earth dist. -3210 Dec 22 i 02:53 -3215 Mar 04 i 06:30 15°M retrograde -3209 Apr 09 j 19:23 9°**х** 24′04 -3215 Mar 15 j 09:40 15° ML03'04 retrograde min. Earth dist. -3209 Jun 25 i 22:21 7°**х** 27'36 18.96768 AU -3215 Mar 26 i 12:45 15°RML opposition -3209 Jun 27 j 01:18 7°**∡**¹24'55 0°-17'-52 min. Earth dist. -3215 May 31 i 03:54 13°ML06'06 18.70217 AU direct -3209 Sep 10 j 21:10 5°**х** 28'34 -3215 Jun 01 j 04:41 13°ML03'37 0°04'18 opposition direct -3215 Aug 16 j 15:18 11° ML05'49 -3209 Dec 25 j 04:30 9°×22'14 0°-17'-43 conjunction -3215 Nov 29 j 10:09 15°M -3209 Dec 25 j 04:30 9°**x**²22'14 0°17'51 minimum elong max. Earth dist. -3209 Dec 26 j 09:26 9°**₰**26'25 20.98189 AU conjunction -3215 Nov 30 j 17:40 15°M 04'38 0°02'15 retrograde -3208 Apr 13 j 03:49 13°**x** 24'29 minimum elong -3215 Nov 30 j 17:40 15°ML04'38 0°02'11 min. Earth dist. -3208 Jun 29 j 07:25 11° ₹28'01 18.99565 AU behind sun begin -3215 Nov 30 j 11:08 15°ML03'42 opposition -3208 Jun 30 j 10:39 11°**尽**25'17 0°-21'-18 direct -3208 Sep 14 j 05:20 9°**×**⁷29'02 behind sun end -3215 Dec 01 j 00:12 15°ML05'34 -3215 Dec 01 j 20:02 15°ML08'30 20.72924 AU max. Earth dist. -3208 Dec 28 j 09:28 13°**x** 22'06 0°-20'-46 retrograde -3214 Mar 19 j 19:19 19°M 09'00 conjunction opposition -3214 Jun 05 j 17:38 17°ML09'38 0°00'30 minimum elong -3208 Dec 28 j 09:28 13°**尽**22'06 0°20'53 min. Earth dist. -3214 Jun 04 j 15:56 17°ML12'13 18.75597 AU max. Earth dist. -3208 Dec 29 j 13:21 13°**₹**26'07 21.00755 AU desc. node -3214 Jul 24 j 09:10 15°M 30'58 retrograde -3207 Apr 17 j 11:40 17° ₹ 24'07 direct -3214 Aug 21 j 02:29 15°ML12'11 opposition -3207 Jul 04 j 19:35 15°**尽** 24'51 0°-24'-37 min. Earth dist. -3207 Jul 03 j 16:53 15°**х** 27'31 19.01916 AU -3214 Dec 04 j 23:51 19°ML09'56 0°-1'-15 -3207 Sep 18 j 11:10 13° ₹28'39 conjunction direct

-3214 Dec 04 j 23:51 19°ML09'56 0°01'22

minimum elong

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Earth dist. -3206 Sep 22 j 17:48 17°**尽**27'32 -3198 Oct 24 j 08:24 19°♂11'32 direct direct -3197 Feb 06 j 18:51 23°る03'53 0°-43'-32 conjunction -3205 Jan 05 j 19:31 21° ₹ 19'39 0°-26'-32 conjunction -3197 Feb 06 j 18:51 23°**ठ**03'53 0°43'39 -3205 Jan 05 j 19:31 21°**√**19'39 minimum elong 0°26'40 minimum elong -3197 Feb 07 j 17:11 23°る07'03 21.04606 AU max. Earth dist. -3205 Jan 06 j 23:25 21° ₹23'39 21.04634 AU max. Earth dist. -3205 Apr 26 j 03:31 25° ₹21'22 -3197 May 28 j 23:50 27°る06'43 retrograde retrograde -3205 Jul 12 j 09:23 23°**√**24'36 19.05416 AU -3197 Aug 14 j 17:50 25°る07'04 0°-48'-51 min. Earth dist. opposition opposition -3205 Jul 13 j 11:47 23°**尽**21'58 0°-30'-51 min. Earth dist. -3197 Aug 13 j 22:20 25°**궁**09'02 19.03639 AU direct -3205 Sep 26 j 22:59 21°**尽**25'48 direct -3197 Oct 28 j 12:08 23°♂10'42 conjunction -3204 Jan 10 j 00:41 25° ₹ 17'37 0°-29'-13 conjunction -3196 Feb 11 j 02:40 27°る03'30 0°-44'-49 minimum elong -3204 Jan 10 j 00:41 25°**√**17'37 0°29'21 minimum elong -3196 Feb 11 j 02:40 27°る03'30 0°44'56 max. Earth dist. -3204 Jan 11 j 05:33 25° ₹721'45 21.06009 AU max. Earth dist. -3196 Feb 12 j 00:26 27°る06'35 21.02447 AU retrograde -3204 Apr 29 j 11:28 29° ₹ 19'15 -3196 Apr 08 j 19:07 0°**≈** opposition -3204 Jul 16 j 19:05 27° **₹** 19'49 0°-33'-44 retrograde -3196 Jun 01 j 09:21 1°≈06'39 min. Earth dist. -3204 Jul 15 j 16:22 27° ₹22'30 19.06608 AU -3196 Jul 26 j 10:30 30°Rる direct -3204 Sep 30 j 04:24 25° ₹23'42 min. Earth dist. -3196 Aug 17 j 05:22 29°る08'49 19.01195 AU opposition -3196 Aug 18 j 00:08 29°**る**06'55 0°-50'-10 -3196 Oct 31 j 18:17 27°る10'23 conjunction -3203 Jan 13 i 05:44 29° ₹15'17 0°-31'-45 direct -3203 Jan 13 i 05:44 29° ₹15'17 0°31'53 -3195 Jan 26 j 15:02 minimum elong max. Earth dist. -3203 Jan 14 j 09:16 29° ₹19'13 21.07029 AU -3203 Jan 26 j 08:05 0°₹ -3195 Feb 14 j 10:47 1°≈03'40 0°-45'-53 conjunction -3203 May 03 j 19:25 3°**ප**16'56 -3195 Feb 14 j 10:47 1°≈03'40 0°45'59 retrograde minimum elong -3203 Jul 20 j 00:32 1°る20'02 19.07457 AU -3195 Feb 15 j 05:46 1°≈06'22 20.99746 AU max. Earth dist. min. Earth dist. -3203 Jul 21 j 02:21 -3195 Jun 05 j 18:30 opposition 1°る17'26 0°-36'-28 retrograde 5°≈07'13 -3203 Aug 25 j 05:28 30°R.**✓** -3195 Aug 22 j 06:37 opposition 3°≈07'20 0°-51'-13 -3195 Aug 21 j 14:13 -3203 Oct 04 j 08:45 29°**尽**21'20 direct min. Earth dist. 3°≈09'01 18.98240 AU -3203 Nov 12 j 10:16 0°る -3195 Nov 04 j 22:37 direct 1°≈10'35 -3202 Jan 17 j 11:03 -3194 Feb 18 j 19:30 3°る12'49 0°-34'-9 5°≈04'27 0°-46'-43 conjunction conjunction -3202 Jan 17 j 11:03 3°る12'49 0°34'16 -3194 Feb 18 j 19:30 minimum elong minimum elong 5°≈04'27 0°46'50 max. Earth dist. -3202 Jan 18 j 15:23 3°る16'51 21.07693 AU max. Earth dist. -3194 Feb 19 j 13:54 5°≈07'04 20.96553 AU retrograde -3202 May 08 j 04:03 7°**る**14'31 retrograde -3194 Jun 10 j 04:12 9°≈08'24 min. Earth dist. -3202 Jul 24 j 07:19 5°る17'37 19.07927 AU opposition -3194 Aug 26 j 12:57 7°≈08'23 0°-52'-2 opposition -3202 Jul 25 j 09:14 5°**ට**15'01 0°-39'-1 min. Earth dist. -3194 Aug 25 j 21:16 7°≈09'59 18.94809 AU direct -3202 Oct 08 j 14:07 3°**ප**18'56 direct -3194 Nov 09 j 04:44 5°≈11'23 -3201 Jan 21 j 16:36 7°る10'23 0°-36'-23 -3193 Feb 23 j 04:39 9°≈05'54 0°-47'-20 conjunction conjunction -3201 Jan 21 j 16:36 7°る10'23 0°36'31 -3193 Feb 23 j 04:39 9°≈05'54 0°47'26 minimum elong minimum elong -3201 Jan 22 i 19:18 -3193 Feb 23 i 20:16 max. Earth dist. 7°る14'11 21.07975 AU max. Earth dist. 9°≈08'08 20.92915 AU -3201 May 12 j 12:03 11°る12'12 retrograde retrograde -3193 Jun 14 j 13:44 13°≈10'19 -3201 Jul 29 i 15:54 opposition 9°**ට**12'41 0°-41'-23 opposition -3193 Aug 30 j 19:21 11°≈10'08 0°-52'-35 min. Earth dist. -3201 Jul 28 j 15:25 9°る15'09 19.08013 AU min. Earth dist. -3193 Aug 30 i 06:06 11°≈11'30 18.90978 AU direct -3201 Oct 12 j 17:33 7°**ප**16'36 direct -3193 Nov 13 j 09:36 9°≈12'51 -3200 Jan 25 j 22:37 11°る08'09 0°-38'-27 -3192 Feb 27 j 14:28 13°≈08'09 0°-47'-43 conjunction conjunction -3200 Jan 25 j 22:37 11°る08'09 0°38'34 -3192 Feb 27 j 14:28 13°≈08'09 0°47'49 minimum elong minimum elong -3200 Jan 27 j 01:41 11°る12'01 21.07849 AU -3192 Feb 28 j 05:30 13°≈10'18 20.88907 AU max. Earth dist. max. Earth dist. -3192 Apr 01 j 10:10 15°≈ retrograde -3200 May 15 j 21:24 15°る10'09 opposition -3200 Aug 01 j 22:25 13°る10'38 0°-43'-34 retrograde -3192 Jun 18 j 00:08 17°≈13'04 min. Earth dist. -3200 Jul 31 j 22:10 13°정13'04 19.07661 AU opposition -3192 Sep 03 j 01:51 15°≈12'45 0°-52'-53 -3200 Oct 15 j 23:12 11°る14'32 min. Earth dist. -3192 Sep 02 j 13:10 15°≈14'03 18.86797 AU direct -3192 Sep 08 j 05:50 15°R≈ -3199 Jan 29 j 04:43 15°**⋜**06'15 0°-40'-20 -3192 Nov 16 j 15:59 13°≈15'11 conjunction direct -3199 Jan 29 j 04:42 15°**궁**06'15 0°40'28 -3191 Jan 21 j 15:48 15°≈ minimum elong max. Earth dist. -3199 Jan 30 j 05:46 15°**⋜**09'49 21.07272 AU retrograde -3199 May 20 j 05:32 19°る08'30 conjunction -3191 Mar 03 j 00:32 17°≈11'19 0°-47'-52 min. Earth dist. -3199 Aug 05 j 06:36 17°る11'13 19.06849 AU minimum elong -3191 Mar 03 j 00:32 17°≈11'19 0°47'57 opposition -3199 Aug 06 j 05:01 17°る08'57 0°-45'-33 max. Earth dist. -3191 Mar 03 j 12:57 17°≈13'05 20.84576 AU -3199 Oct 20 j 02:24 15° ₹ 12'49 retrograde -3191 Jun 22 j 09:54 21°≈16'48 direct

opposition

-3191 Sep 07 j 08:42 19°≈16'20 0°-52'-56

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 15 Attention, astronomical year style is used: The year -3191 in astronomical counting style is the year 3192 BCE in historical counting style.

-	nical year style is used: The		•			, 1	age 15
min. Earth dist.	-3191 Sep 06 j 22:25	-		min. Earth dist.	-3183 Oct 10 j 08:56		
direct	-3191 Nov 20 j 21:24	17° ≈ 18′29		direct	-3183 Dec 23 j 17:32	20°) 36′47	
conjunction	-3190 Mar 07 j 11:37	21° ≈ 15'34	0°-47'-46	conjunction	-3182 Apr 11 j 09:01		
minimum elong	-3190 Mar 07 j 11:38	21° ≈ 15'34	0°47'51	minimum elong	-3182 Apr 11 j 09:01		
max. Earth dist.	-3190 Mar 07 j 23:21		20.79976 AU	max. Earth dist.	-3182 Apr 11 j 02:34		20.34413 AU
retrograde	-3190 Jun 26 j 21:36			retrograde	-3182 Jul 31 j 06:53		
opposition	-3190 Sep 11 j 15:31			opposition	-3182 Oct 14 j 14:51		
min. Earth dist.	-3190 Sep 11 j 05:53		18.77595 AU	min. Earth dist.	-3182 Oct 14 j 20:42		18.31014 AU
direct	-3190 Nov 25 j 04:39	21°≈22'56		direct	-3182 Dec 28 j 06:31	24° ¥ 53'58	
conjunction	-3189 Mar 11 j 23:19	25°∞21'02	0°-47'-26	conjunction	-3181 Apr 16 j 03:36	20°¥02'30	0°-35'-58
minimum elong	-3189 Mar 11 j 23:19			minimum elong	-3181 Apr 16 j 03:36		0°35'59
max. Earth dist.	-3189 Mar 12 j 08:15			max. Earth dist.	-3181 Apr 15 j 18:19		20.27591 AU
retrograde	-3189 Jul 01 j 07:45		20.,0120110	man. Darm dist.	-3181 May 02 j 12:34	0°Υ	20.27071110
opposition	-3189 Sep 15 j 22:54		0°-52'-13	retrograde	-3181 Aug 04 j 21:22	3° Υ 15'29	
min. Earth dist.	-3189 Sep 15 j 15:48			opposition	-3181 Oct 19 j 02:20		0°-38'-32
direct	-3189 Nov 29 j 10:30			min. Earth dist.	-3181 Oct 19 j 11:06	1° Y 13'03	18.24124 AU
	J				-3181 Nov 19 j 04:44	30° ₹ ₩	
conjunction	-3188 Mar 15 j 11:44	29° ≈ 27'54	0°-46'-52	direct	-3180 Jan 01 j 17:51	29°) 12'46	
minimum elong	-3188 Mar 15 j 11:44	29° ≈ 27'54	0°46'56		-3180 Feb 13 j 15:20	0° Y	
max. Earth dist.	-3188 Mar 15 j 19:48	29° ≈ 29'03	20.70056 AU				
	-3188 Mar 24 j 19:09	0° ∀		conjunction	-3180 Apr 19 j 22:46	3° Y 22'56	0°-33'-28
retrograde	-3188 Jul 04 j 20:42	3°) 35′20		minimum elong	-3180 Apr 19 j 22:46	3° Y 22'56	0°33'30
opposition	-3188 Sep 19 j 06:29	1°) 34'34	0°-51'-27	max. Earth dist.	-3180 Apr 19 j 11:30	3° Y 21'16	20.20657 AU
min. Earth dist.	-3188 Sep 19 j 00:05	1°) 35′14	18.67444 AU	retrograde	-3180 Aug 08 j 14:55	7° Y 36'33	
	-3188 Nov 01 j 23:56	30°R ≈		opposition	-3180 Oct 22 j 14:13		0°-35'-40
direct	-3188 Dec 02 j 19:11	29° ≈ 35'54		min. Earth dist.	-3180 Oct 22 j 23:51		18.17156 AU
	-3187 Jan 02 j 05:15	0° ℋ		direct	-3179 Jan 05 j 08:25	3° Ƴ 33'11	
	210734 20:00.50	201/26110	00.461.2		2170 4 24:10.51	700044150	00 201 47
conjunction	-3187 Mar 20 j 00:58	3°) (36'18		conjunction	-3179 Apr 24 j 18:51	7° Y 44'52	0°-30'-47
minimum elong max. Earth dist.	-3187 Mar 20 j 00:58	3° ¥ 36'18	0°46'07 20.64762 AU	minimum elong max. Earth dist.	-3179 Apr 24 j 18:52	7° Y 44'52	0°30'47 20.13673 AU
	-3187 Mar 20 j 06:09 -3187 Jul 09 j 07:34	3 X 3703 7° X 44′29	20.04/02 AU		-3179 Apr 24 j 05:24 -3179 Aug 13 j 06:18	11° Υ 59'15	20.130/3 AU
retrograde opposition	-3187 Jul 09 j 07:34 -3187 Sep 23 j 14:37		0°-50'-25	retrograde opposition	-3179 Aug 13 j 00:18 -3179 Oct 27 j 02:46		0°-32'-35
min. Earth dist.	-3187 Sep 23 j 11:01		18.62038 AU	min. Earth dist.	-3179 Oct 27 j 15:04		18.10188 AU
direct	-3187 Dec 07 j 01:41	3°) (44'41	10.02030 AC	direct	-3178 Jan 09 j 21:02	7° Υ '55'15	10.10100 AC
uncer	3107 Dec 07 j 01.11	3 7(1111		ancer	5170 Juli 07 j 21.02	7 1 33 13	
conjunction	-3186 Mar 24 j 15:14	7°) 46′22	0°-44'-59	conjunction	-3178 Apr 29 j 15:44	12° Y ′08′29	0°-27'-53
minimum elong	-3186 Mar 24 j 15:14	7°) €46'22	0°45'02	minimum elong	-3178 Apr 29 j 15:44	12° Y 08'29	0°27'53
max. Earth dist.	-3186 Mar 24 j 19:05	7°) 46′55	20.59244 AU	max. Earth dist.	-3178 Apr 29 j 00:09	12° Y 06'10	20.06739 AU
retrograde	-3186 Jul 13 j 21:53	11° ¥ 55′18		retrograde	-3178 Aug 18 j 01:09	16° Ƴ 23'38	
opposition	-3186 Sep 27 j 23:06	9°) 54′24	0°-49'-7	opposition	-3178 Oct 31 j 15:55		
min. Earth dist.	-3186 Sep 27 j 20:31		18.56383 AU	min. Earth dist.	-3178 Nov 01 j 04:57		18.03298 AU
direct	-3186 Dec 11 j 12:02	7° ¥ 55'10		direct	-3177 Jan 14 j 13:07	12° Y 19′02	
aaniumatian	-3185 Mar 29 j 06:20	110 W 50110	00 42! 40	agniumation	-3177 May 04 j 13:19	1600022140	00 24! 40
conjunction minimum elong	-3185 Mar 29 j 06:21			conjunction minimum elong	-3177 May 04 j 13:19	16 γ 33 49 16° γ 33'49	
max. Earth dist.	-3185 Mar 29 j 07:01			max. Earth dist.	-3177 May 04 j 13:19		
retrograde	-3185 Jul 18 j 09:46		20.33430 AO	retrograde	-3177 Aug 22 j 17:47		17.77700 AC
opposition	-3185 Oct 02 j 08:14		0°-47'-32	opposition	-3177 Nov 05 j 05:54		0°-25'-46
min. Earth dist.	-3185 Oct 02 j 08:44			min. Earth dist.	-3177 Nov 05 j 21:12		
direct	-3185 Dec 15 j 20:02			direct	-3176 Jan 19 j 03:26		
conjunction	-3184 Apr 01 j 22:25			conjunction	-3176 May 08 j 11:33		
minimum elong	-3184 Apr 01 j 22:25			minimum elong	-3176 May 08 j 11:33		
max. Earth dist.	-3184 Apr 01 j 21:15		20.47384 AU	max. Earth dist.	-3176 May 07 j 16:17		19.93255 AU
retrograde	-3184 Jul 22 j 01:12			retrograde	-3176 Aug 26 j 13:40		
opposition	-3184 Oct 05 j 17:51			opposition	-3176 Nov 08 j 20:28		
min. Earth dist.	-3184 Oct 05 j 19:27		18.44237 AU	min. Earth dist.	-3176 Nov 09 j 12:20		17.90018 AU
direct	-3184 Dec 19 j 07:39	16° ∺ 21'14		direct	-3175 Jan 22 j 20:40	21°' y '12'03	
conjunction	-3183 Apr 06 j 15:10	20°¥27'01	0° 40' 17	conjunction	-3175 May 13 j 10:38	250 ₩ 20150	0°-18'-11
minimum elong	-3183 Apr 06 j 15:10 -3183 Apr 06 j 15:10		0°-40'-1 / 0°40'19	conjunction minimum elong	-3175 May 13 j 10:38		0°-18'-11 0°18'10
max. Earth dist.	-3183 Apr 06 j 10:51			max. Earth dist.	-3175 May 13 j 10:38		
retrograde	-3183 Jul 26 j 14:31		20.71023 AU	retrograde	-3175 Aug 31 j 08:00		17.0003 / AU
opposition	-3183 Oct 10 j 04:14		0°-43'-33	opposition	-3175 Nov 13 j 12:01		0°-18'-16
оррознин	5105 Oct 10 J 04.14	22 / (3/0/	U TU TU	оррознин	5175 110V 13 J 12.01	∠/ I ¬J 10	J 10-10

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3175 in astronomical counting style is the year 3176 BCE in historical counting style. -3175 Nov 14 j 05:51 27°**Υ**43'14 17.83729 AU min. Earth dist. conjunction -3168 Jun 15 j 22:37 27° **8**45'27 -3174 Jan 27 j 12:48 25°**Y**'41'26 minimum elong -3168 Jun 15 j 22:38 27°**8**45'27 0°08'17 direct max. Earth dist. -3174 May 17 j 11:54 29°**Υ**57'31 19.80688 AU -3168 Jun 15 j 16:41 27°**8**44'33 behind sun begin -3168 Jun 16 j 04:35 27°**8**46'21 behind sun end -3168 Jun 14 j 16:15 27°**8**40'45 19.49261 AU 0°800'55 0°-14'-40 conjunction -3174 May 18 j 10:25 max. Earth dist. -3174 May 18 j 10:25 0°**8**00'55 -3168 Jul 23 j 19:40 minimum elong 0°14'37 Π $^{\circ}$ 0 2°**Ⅲ**07'11 -3174 May 18 j 07:51 0°800'32 -3168 Oct 02 j 12:57 behind sun begin retrograde -3174 May 18 j 13:00 -3168 Dec 14 j 22:47 behind sun end 0°**8**01'18 opposition 0°**I**04'54 0°11'12 -3174 May 18 j 04:18 0°X min. Earth dist. -3168 Dec 16 j 00:25 0°**Д**02'06 17.47147 AU 4°819'07 retrograde -3174 Sep 05 j 04:54 -3168 Dec 16 j 19:42 30°₹**႘** opposition -3174 Nov 18 j 04:07 2°**8**16'51 0°-14'-17 direct -3167 Feb 28 j 17:54 27°**8**59'11 -3167 May 10 j 01:48 min. Earth dist. -3174 Nov 18 j 22:41 2°**8**14'50 17.77719 AU $\mathbb{I}^{\circ 0}$ -3173 Feb 01 j 07:28 -3167 Jun 19 j 20:10 direct 0°**8**12'49 max. Earth dist. 2°**Ⅲ**23'20 19.45059 AU conjunction -3173 May 23 j 11:04 4°**8**33'52 0°-11'-2 conjunction -3167 Jun 21 j 02:12 2°**Ⅲ**27'59 0°12'01 minimum elong -3173 May 23 j 11:04 4°**8**33'52 0°10'59 minimum elong -3167 Jun 21 j 02:12 2°**Ⅲ**27'59 0°12'06 behind sun begin -3173 May 23 j 06:02 4°833'07 behind sun begin -3167 Jun 20 j 21:42 2°**Ⅲ**27'18 behind sun end -3173 May 23 j 16:06 4°**8**34'36 behind sun end -3167 Jun 21 j 06:42 2°**Ⅲ**28'40 max. Earth dist. -3173 May 22 j 12:01 4°**8**30'22 19.74804 AU retrograde -3167 Oct 07 j 12:25 6°**Ⅲ**50′03 retrograde -3173 Sep 10 j 00:41 8°**8**52'47 opposition -3167 Dec 19 j 20:27 4°II47'45 0°15'25 opposition -3173 Nov 22 j 21:17 6°**8**50'32 0°-10'-10 min. Earth dist. -3167 Dec 20 j 22:14 4°**Д**44'56 17.43136 AU min. Earth dist. -3173 Nov 23 i 17:35 6°848'19 17.71970 AU direct -3166 Mar 05 i 19:13 2°**Ⅱ**41'46 direct -3172 Feb 06 i 01:51 4°846'14 max. Earth dist. -3166 Jun 24 j 22:27 7°**Д**06'37 19.41259 AU max. Earth dist. -3172 May 26 j 10:38 9°**8**04'52 19.69190 AU conjunction -3166 Jun 26 i 05:47 7°**I**11'30 0°15'45 -3172 May 27 j 12:05 9°808'45 0°-7'-18 -3166 Jun 26 j 05:46 7°**Ⅱ**11'30 0°15'52 conjunction minimum elong -3172 May 27 j 12:05 9°**8**08'45 0°07'16 -3166 Oct 12 j 11:18 11°**Д**33'50 retrograde minimum elong -3172 May 27 j 05:53 9°807'50 -3166 Dec 24 j 18:46 9°**I**31'30 0°19'34 behind sun begin opposition -3172 May 27 j 18:18 9°809'40 -3166 Dec 25 j 21:26 9°**Д**28'35 17.39578 AU behind sun end min. Earth dist. -3172 Sep 13 j 22:06 13°**8**28'23 -3165 Mar 10 j 19:55 7°**Ⅱ**25'16 retrograde direct -3165 Jun 30 j 02:50 11°**Д**51'01 19.37946 AU -3172 Nov 26 j 15:11 11°\(26'08\) 0°-5'-58 opposition max. Earth dist. -3172 Nov 27 j 12:24 11°**8**23'50 17.66489 AU min. Earth dist. -3171 Feb 09 j 22:12 9°**8**21'33 -3165 Jul 01 j 09:28 11°**Ц**55'47 0°19'24 direct conjunction -3165 Jul 01 j 09:27 11°**I**I55'47 minimum elong -3165 Oct 17 j 11:27 16°**Ⅲ**18'20 -3171 Jun 01 j 14:07 13°**8**45'32 0°-3'-31 conjunction retrograde -3171 Jun 01 j 14:07 13°**8**45'32 0°03'26 -3165 Dec 29 j 17:39 14°**I**I15'59 0°23'34 minimum elong opposition -3171 Jun 01 j 07:23 13°**8**44'32 -3165 Dec 30 j 19:37 14°**II**13'08 17.36525 AU behind sun begin min. Earth dist. -3171 Jun 01 j 20:52 13°**8**46'32 behind sun end direct -3164 Mar 14 j 21:51 12°**Ⅲ**09'32 max. Earth dist. -3171 May 31 j 12:19 13°**8**41'36 19.63818 AU max. Earth dist. -3164 Jul 04 j 06:07 16°**Ц**35'54 19.35166 AU -3171 Jun 22 j 02:42 15°**8** -3164 Jul 05 j 12:57 16°**Д**40'43 0°22'55 retrograde -3171 Sep 18 j 19:10 18°**8**05'47 conjunction -3171 Dec 01 j 09:53 16°803'33 0°-1'-42 -3164 Jul 05 j 12:56 16°**Д**40'43 0°23'02 opposition minimum elong min. Earth dist. -3171 Dec 02 j 08:36 16°801'05 17.61239 AU -3164 Oct 21 j 10:48 21°**Д**03'25 retrograde -3171 Dec 26 j 21:56 15°R8 -3163 Jan 02 j 17:09 19°**Д**01'02 0°27'25 opposition -3170 Feb 14 j 19:39 13°**8**58'42 min. Earth dist. -3163 Jan 03 j 19:42 18°**Д**58'08 17.34048 AU direct -3170 Apr 04 i 19:23 15°₩ -3163 Mar 19 j 23:10 16°**Д**54'25 direct -3170 Apr 28 j 13:30 16°**8**06'36 asc. node max. Earth dist. -3163 Jul 09 j 10:26 21°**П**21'26 19.32991 AU -3170 Jun 06 j 16:34 18°\(24'02 0°00'26\) -3163 Jul 10 j 16:29 21°**Д**26'09 0°26'18 conjunction conjunction -3163 Jul 10 j 16:29 21°**II**26'09 minimum elong -3170 Jun 06 i 16:35 18°**8**24'02 0°00'30 0°26'24 minimum elong -3170 Jun 06 j 09:49 18°\begin{align*} 23'01 \end{align*} retrograde -3163 Oct 26 j 11:11 25° **II**48'55 behind sun begin behind sun end -3170 Jun 06 j 23:21 18°\begin{align*} 25'03 \end{align*} opposition -3162 Jan 07 j 17:01 23°**Ⅲ**46'34 0°31'06 max. Earth dist. -3170 Jun 05 j 12:13 18°819'41 19.58691 AU min. Earth dist. -3162 Jan 08 j 18:12 23°**Д**43'49 17.32181 AU -3170 Sep 23 j 16:41 22°844'51 -3162 Mar 25 j 02:25 21°**Ⅲ**39'51 retrograde direct -3170 Dec 06 j 05:30 20°842'37 opposition 0°02'36 min. Earth dist. -3170 Dec 07 j 05:15 20°840'01 17.56250 AU conjunction -3162 Jul 15 j 19:57 26° **Ⅱ**12'01 0°29'29 -3169 Feb 19 j 18:04 18°**8**37'28 -3162 Jul 15 j 19:57 26°**Ⅲ**12'01 direct minimum elong 0°29'35 -3162 Jul 14 j 14:41 26°**Д**07'25 19.31444 AU max. Earth dist. -3169 Jun 11 j 19:28 23°**8**04'04 0°04'21 -3162 Sep 26 j 03:19 conjunction 0ಂತಾ -3169 Jun 11 j 19:28 23°**8**04'04 0°04'26 -3162 Oct 31 j 10:19 minimum elong retrograde 0°934'48 -3169 Jun 11 j 12:49 23°**8**03'04 -3162 Dec 06 j 11:11 30°RⅡ behind sun begin -3169 Jun 12 j 02:07 23°**8**05'04 behind sun end opposition -3161 Jan 12 j 17:39 28°**Ⅲ**32'31 0°34'33 -3169 Jun 10 j 15:10 22°**8**59'42 19.53825 AU max. Earth dist. min. Earth dist. -3161 Jan 13 j 19:06 28°**Ⅲ**29'44 17.30972 AU retrograde -3169 Sep 28 j 14:56 27°**8**25'22 direct -3161 Mar 30 j 04:23 26°**Ⅲ**25'46 opposition -3169 Dec 11 j 01:51 25°**8**23'07 0°06'54 -3161 Jul 05 j 10:50 min. Earth dist. -3169 Dec 12 j 02:26 25°820'26 17.51527 AU -3168 Feb 24 j 18:04 23°**8**17'42 -3161 Jul 20 j 22:58 0°558'12 0°32'29 direct conjunction

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Earth dist. -3160 Jul 23 j 23:08 5°940'27 19.30331 AU -3152 Sep 01 j 08:49 13°**Ω**46'08 0°47'34 conjunction conjunction -3160 Jul 25 j 02:01 5°5644'41 0°35'17 minimum elong -3152 Aug 31 j 18:16 13°**Ω**43'50 19.46932 AU minimum elong -3160 Jul 25 j 02:01 5°5944'41 0°35'22 max. Earth dist. retrograde -3160 Nov 09 j 10:10 10°907'21 -3152 Sep 21 j 03:05 15°**Ω** -3159 Jan 21 j 19:50 $-3152 \,\mathrm{Dec}\ 17\,\mathrm{j}\ 06:05\ 18^{\circ}\Omega05'38$ opposition 8°**©**05'19 0°40'46 retrograde -3159 Jan 22 j 19:41 -3151 Mar 01 j 13:39 $16^{\circ}\Omega$ 04'30 $0^{\circ}53'07$ min. Earth dist. 8°502'43 17.30489 AU opposition direct -3159 Apr 08 j 11:28 5°958'41 min. Earth dist. -3151 Mar 02 j 02:18 16°**Ω**03'10 17.48923 AU max. Earth dist. -3159 Jul 29 j 02:12 10°527'09 19.30707 AU -3151 Mar 28 j 04:15 15°R**Ω** direct -3151 May 17 j 19:34 13°**Ω**59'22 conjunction -3159 Jul 30 j 04:40 10°531'20 0°37'49 -3151 Jul 05 j 15:17 15°**Ω** minimum elong -3159 Jul 30 j 04:40 10°531'20 retrograde -3159 Nov 14 j 10:56 14°553'51 conjunction -3151 Sep $06 \text{ i } 06:22 \quad 18^{\circ} \Omega 26'52$ 0°47'42 opposition -3158 Jan 26 j 21:30 12°551'57 0°43'28 minimum elong $-3151 \text{ Sep } 06 \text{ j } 06:22 \quad 18^{\circ} \Omega 26'52$ 0°47'46 min. Earth dist. -3158 Jan 27 j 19:28 12°549'34 17.31143 AU max. Earth dist. -3151 Sep 05 j 17:13 $18^{\circ}\Omega$ 24'48 19.50994 AU direct -3158 Apr 13 j 16:32 10°545'28 retrograde -3151 Dec 22 i 03:13 $22^{\circ}\Omega 45'43$ max. Earth dist. -3158 Aug 03 j 06:43 15°5514'09 19.31627 AU opposition $-3150 \text{ Mar } 06 \text{ i } 15:29 \quad 20^{\circ} \Omega 44'38 \quad 0^{\circ} 53'05$ min. Earth dist. -3150 Mar 07 j 02:17 $20^{\circ}\Omega 43'30$ 17.53220 AU conjunction -3158 Aug 04 i 07:00 15°\$17'59 0°40'06 direct $-3150 \text{ May } 22 \text{ j } 21:03 \quad 18^{\circ} \Omega 39'46$ -3158 Aug 04 i 07:00 15°\$17'59 0°40'13 minimum elong -3158 Nov 19 j 10:09 19°5540'17 -3150 Sep 11 j 02:58 23° Ω 06'03 0°47'31 retrograde conjunction -3157 Jan 31 j 23:45 17°538'32 0°45'52 -3150 Sep 11 j 02:58 23° Ω 06'03 0°47'34 opposition minimum elong -3157 Feb 01 j 21:35 17°536'11 17.32326 AU max. Earth dist. -3150 Sep 10 j 16:58 23° **Q**04'29 19.55524 AU min. Earth dist. -3150 Dec 27 j 01:26 27° Ω24'11 -3157 Apr 18 j 20:05 15°532'13 direct retrograde -3157 Aug 08 j 08:50 20°500'39 19.33067 AU -3149 Mar 11 j 16:56 25° **Q**23'10 0°52'42 max. Earth dist. opposition -3149 Mar 12 j 01:00 25° **Ω**22'19 17.57973 AU min. Earth dist. -3157 Aug 09 j 08:49 20°504'26 0°42'07 -3149 May 28 j 00:37 23°**Ω**18'37 direct conjunction -3157 Aug 09 j 08:48 20°504'26 0°42'12 minimum elong -3157 Nov 24 j 10:42 24°526'28 -3149 Sep 15 j 22:43 $27^{\circ}\Omega 43'35$ $0^{\circ}47'02$ retrograde conjunction -3156 Feb 06 j 01:56 22°\$24'51 0°47'57 -3149 Sep 15 j 22:43 $27^{\circ}\Omega 43'35$ $0^{\circ}47'06$ opposition minimum elong -3156 Feb 06 j 21:52 22°522'42 17.34010 AU max. Earth dist. -3149 Sep 15 j 14:42 27° Ω42'20 19.60516 AU min. Earth dist. direct -3156 Apr 23 j 01:18 20°518'41 -3149 Oct 24 j 01:21 0° Mg retrograde -3149 Dec 31 j 20:33 2° m 01'00 conjunction -3156 Aug 13 j 10:14 24°550'29 0°43'50 opposition -3148 Mar 15 j 17:51 0°M/00'05 0°51'58 -3156 Aug 13 j 10:14 24°550'29 0°43'56 -3148 Mar 15 j 18:43 30°RΩ minimum elong max. Earth dist. -3156 Aug 12 j 12:46 24°547'05 19.34978 AU min. Earth dist. -3148 Mar 16 j 00:12 29° **Ω**59'25 17.63204 AU retrograde -3156 Nov 28 j 09:39 29°512'08 -3148 Jun 01 j 00:58 27°**Ω**55'53 direct -3155 Feb 10 j 04:29 27°510'39 0°49'41 -3148 Aug 11 j 13:29 opposition min. Earth dist. -3155 Feb 10 j 23:53 27°508'34 17.36137 AU -3148 Sep 19 i 17:41 2° m 19'30 0°46'15 direct -3155 Apr 28 i 05:12 25°504'41 conjunction minimum elong -3148 Sep 19 i 17:41 2° m 19'30 0°46'18 -3148 Sep 19 i 12:28 conjunction -3155 Aug 18 i 10:57 29°535'53 0°45'14 max. Earth dist. 2° m 18'42 19.65974 AU minimum elong -3155 Aug 18 i 10:57 29°535'53 0°45'19 retrograde -3147 Jan 04 i 17:34 6° m 36'10 opposition max. Earth dist. -3155 Aug 17 j 13:50 29°532'33 19.37328 AU -3147 Mar 20 j 18:21 4° m 35'23 0°50'56 -3155 Aug 24 j 19:28 $0^{\circ}\Omega$ min. Earth dist. -3147 Mar 20 j 21:37 4° m 35'03 17.68855 AU retrograde -3155 Dec 03 j 09:30 3°Ω57'07 direct -3147 Jun 06 j 03:32 2°m/31'35 -3154 Feb 15 j 06:55 1°Ω55'44 0°51'05 opposition min. Earth dist. -3154 Feb 16 j 00:27 1°**Ω**53'52 17.38701 AU conjunction -3147 Sep 24 j 11:40 6° m 53'48 0°45'11 -3147 Sep 24 j 11:40 -3154 Apr 13 j 14:47 30°Rூ minimum elong 6° **m** 53'48 0°45'14 direct -3154 May 03 j 09:33 29°549'57 max. Earth dist. -3147 Sep 24 j 08:46 6° m 53'20 19.71823 AU -3154 May 22 j 22:01 0 $^{\circ}\Omega$ retrograde -3146 Jan 09 j 11:26 11° Mp 09'42 -3146 Mar 25 j 18:33 9°**™**09'05 0°49'34 opposition -3154 Aug 23 j 11:09 4°Ω20'27 0°46'20 -3146 Mar 25 j 20:19 9° Mp 08'54 17.74887 AU conjunction min. Earth dist. -3154 Aug 23 j 11:08 4°**Ω**20′27 0°46'26 direct -3146 Jun 11 j 02:18 7° m 05'42 minimum elong -3154 Aug 22 j 16:49 4°**Ω**17'33 19.40105 AU max. Earth dist. retrograde -3154 Dec 08 j 08:31 8°**Ω**41′09 conjunction -3146 Sep 29 j 04:52 11° Mp 26'27 0°43'50 opposition -3153 Feb 20 j 09:28 6°**Ω**39'53 0°52'07 minimum elong -3146 Sep 29 j 04:52 11° m 26'27 0°43'53 min. Earth dist. -3153 Feb 21 j 01:48 6°**Ω**38'09 17.41679 AU max. Earth dist. -3146 Sep 29 j 04:24 11° m 26'22 19.78025 AU retrograde direct -3153 May 08 j 13:12 4°**£**34′19 -3145 Jan 14 j 07:27 15° m 41'35 -3145 Mar 30 j 18:06 13° Mp 41'07 0° 47'55 opposition -3153 Aug 28 j 10:16 9°**Ω**03'55 0°47'06 min. Earth dist. -3145 Mar 30 j 16:40 13° Mp 41'16 17.81219 AU conjunction

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 18

•	nical year style is used: The		_	` //			
direct	-3145 Jun 16 j 02:57	-		direct	-3137 Jul 22 j 14:36		
	J	•			J		
conjunction	-3145 Oct 03 j 21:12	15° m 57'26	0°42'14	conjunction	-3137 Nov 07 j 03:15	20° ≏ 59'21	0°21'50
minimum elong	-3145 Oct 03 j 21:12	15° m 57'26	0°42'15	minimum elong	-3137 Nov 07 j 03:15	20° ≏ 59'21	0°21'48
max. Earth dist.	-3145 Oct 03 j 23:11	15° m 57'45	19.84476 AU	max. Earth dist.	-3137 Nov 07 j 20:28	21° ≙ 01'57	20.37270 AU
retrograde	-3144 Jan 19 j 00:22	20° My $11'48$		retrograde	-3136 Feb 23 j 05:32	25° ≏ 07'22	
opposition	-3144 Apr 03 j 17:14	18° m 11'30	0°45'57	opposition	-3136 May 10 j 09:27		
min. Earth dist.	-3144 Apr 03 j 14:42	-	17.87772 AU	min. Earth dist.	-3136 May 09 j 16:23	23° ჲ 09'24	18.40422 AU
direct	-3144 Jun 20 j 00:08	16°M(09'01		direct	-3136 Jul 26 j 05:29	21° ≏ 08'14	
conjunction	-3144 Oct 07 j 12:44	20° m 26'43	0°40'22	conjunction	-3136 Nov 10 j 12:22		
minimum elong	-3144 Oct 07 j 12:44	20° m/26'43	0°40'24	minimum elong	-3136 Nov 10 j 12:22		
max. Earth dist.	-3144 Oct 07 j 16:34		19.91110 AU	max. Earth dist.	-3136 Nov 11 j 06:26		20.43560 AU
retrograde	-3143 Jan 22 j 19:20	24° Mp 40'17	0042144	retrograde	-3135 Feb 26 j 19:32		10.46604.433
opposition	-3143 Apr 08 j 15:35	22° m/40'08	0°43'44	min. Earth dist.	-3135 May 14 j 06:25		
min. Earth dist.	-3143 Apr 08 j 10:01		17.94456 AU	opposition	-3135 May 15 j 01:54		0°18'49
direct	-3143 Jun 24 j 22:37	20° Mg 38'06		direct	-3135 Jul 30 j 20:55	25-22/139	
conjunction	-3143 Oct 12 j 03:35	210 m 51115	0°38'17	conjunction	-3135 Nov 14 j 21:03	200 0 25150	0°15'22
minimum elong	-3143 Oct 12 j 03:35		0°38'17	minimum elong	-3135 Nov 14 j 21:03		0°15'19
max. Earth dist.	-3143 Oct 12 j 09:52			behind sun begin	-3135 Nov 14 j 21:05		0 13 19
retrograde	-3142 Jan 27 j 11:28		19.97632 AU	behind sun end	-3135 Nov 14 j 18:43		
opposition	-3142 Apr 13 j 13:39	~	0°41'16	max. Earth dist.	-3135 Nov 14 j 23:21 -3135 Nov 15 j 17:51		20.49777 AU
min. Earth dist.	-3142 Apr 13 j 07:11	-		max. Earth dist.	-3135 Nov 24 j 10:31	0° ™	20.47777110
direct	-3142 Jun 29 j 18:28		10.01207 110	retrograde	-3134 Mar 03 j 07:08	3°MJ32'29	
	51.2 van 25 j 10.20	20 14 00 2 1		opposition	-3134 May 19 j 17:43	1°M32'53	0°15'09
conjunction	-3142 Oct 16 j 17:26	29° m 19'56	0°35'58	min. Earth dist.	-3134 May 18 j 21:13		18.52860 AU
minimum elong	-3142 Oct 16 j 17:26	29° m) 19'56	0°35'57		-3134 Jul 02 j 18:22		
max. Earth dist.	-3142 Oct 17 j 01:07		20.04593 AU	direct	-3134 Aug 04 j 10:09		
	-3142 Oct 27 j 15:31	0∘ ⊽			-3134 Sep 05 j 06:24	0° M .	
retrograde	-3141 Feb 01 j 05:24	3° £ 31'54					
opposition	-3141 Apr 18 j 10:50	1° ≏ 32'00	0°38'34	conjunction	-3134 Nov 19 j 04:59	3°M36'39	0°12'03
min. Earth dist.	-3141 Apr 18 j 01:29	1° ≙ 32'57	18.07952 AU	minimum elong	-3134 Nov 19 j 04:58	3°M36'39	0°12'00
	-3141 May 30 j 21:47	30°R, Mp		behind sun begin	-3134 Nov 19 j 00:24	3°M35'59	
direct	-3141 Jul 04 j 15:13	29° m 30'48		behind sun end	-3134 Nov 19 j 09:32	3°M37'18	
	-3141 Aug 07 j 09:00	0∘ ⊽		max. Earth dist.	-3134 Nov 20 j 02:23		20.55906 AU
				retrograde	-3133 Mar 07 j 19:59	7° M .42'41	
conjunction	-3141 Oct 21 j 06:43	3° ≙ 43'45		min. Earth dist.	-3133 May 23 j 10:15		18.58929 AU
minimum elong	-3141 Oct 21 j 06:43	3° Ω 43'45	0°33'27	opposition	-3133 May 24 j 08:44	5°M.43'11	0°11'25
max. Earth dist.	-3141 Oct 21 j 16:47		20.11305 AU	direct	-3133 Aug 08 j 23:38	3°M44'48	
retrograde	-3140 Feb 05 j 20:07	7° 2 54'54	0025120		212231 22:12.27	70M 46102	0000141
opposition	-3140 Apr 22 j 07:18	5° Ω 55'05	0°35'39	conjunction	-3133 Nov 23 j 12:37	7°M46'03	0°08'41
min. Earth dist.	-3140 Apr 21 j 21:16	3° £ 56'06	18.14631 AU	minimum elong	-3133 Nov 23 j 12:37	7° M .46'03 7° M .45'14	0°08'37
direct	-3140 Jul 08 j 09:38	3 == 34 10		behind sun begin behind sun end	-3133 Nov 23 j 06:54 -3133 Nov 23 j 18:20	7°M46'53	
conjunction	-3140 Oct 24 j 19:05	8° 亞 05'38	0°30'45	max. Earth dist.	-3133 Nov 24 j 12:28		20.61885 AU
minimum elong	-3140 Oct 24 j 19:05	8° 亞 05'38	0°30'44	retrograde	-3133 Nov 24 j 12.28 -3132 Mar 11 j 06:57		20.01003 AU
max. Earth dist.	-3140 Oct 25 j 06:06		20.17945 AU	opposition	-3132 May 27 j 22:56	9°M.52'06	0°07'40
retrograde	-3139 Feb 09 j 12:50			min. Earth dist.	-3132 May 26 j 23:42		18.64813 AU
opposition	-3139 Apr 27 j 03:00	10° £ 16'12	0°32'33	direct	-3132 Aug 12 j 11:42	7°ML54'06	
min. Earth dist.	-3139 Apr 26 j 14:16		18.21217 AU				
direct	-3139 Jul 13 j 04:36	8° ≙ 15'45		conjunction	-3132 Nov 26 j 19:39	11° M .54'09	0°05'18
	· ·			minimum elong	-3132 Nov 26 j 19:40		0°05'15
conjunction	-3139 Oct 29 j 06:35	12° ≏ 25'31	0°27'54	behind sun begin	-3132 Nov 26 j 13:20		
minimum elong	-3139 Oct 29 j 06:35	12° ≏ 25'31	0°27'54	behind sun end	-3132 Nov 27 j 02:00	11°ML55'04	
max. Earth dist.	-3139 Oct 29 j 20:10	12° ≏ 27'34	20.24474 AU	max. Earth dist.	-3132 Nov 27 j 19:43	11°ML57'42	20.67669 AU
retrograde	-3138 Feb 14 j 02:01	16° ≏ 35'04			-3131 Jan 25 j 08:27	15°M	
opposition	-3138 May 01 j 22:07	14° ≏ 35'19	0°29'18	retrograde	-3131 Mar 15 j 18:28	15°M59'06	
min. Earth dist.	-3138 May 01 j 08:34		18.27698 AU		-3131 May 06 j 06:50		
direct	-3138 Jul 17 j 21:31	12° ≏ 35'13		min. Earth dist.	-3131 May 31 j 11:58		18.70482 AU
				opposition	-3131 Jun 01 j 12:39	13°M59'47	0°03'52
conjunction	-3138 Nov 02 j 17:16		0°24'55	direct	-3131 Aug 16 j 23:10		
minimum elong	-3138 Nov 02 j 17:16		0°24'53		-3131 Nov 13 j 15:08	15° M ₊	
max. Earth dist.	-3138 Nov 03 j 07:47		20.30916 AU				
retrograde	-3137 Feb 18 j 17:27		000 515 5	conjunction	-3131 Dec 01 j 02:25		0°01'52
opposition	-3137 May 06 j 16:07			minimum elong	-3131 Dec 01 j 02:24		0°01'47
min. Earth dist.	-3137 May 06 j 00:00	18-24-05	18.54101 AU	behind sun begin	-3131 Nov 30 j 19:51	10,111,00,08	

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3131 in astronomical counting style is the year 3132 BCE in historical counting style.

Attention, astronom	ical year style is used: The	ne year -3131	in astronomical cou	inting style is the year	3132 BCE in historical	counting style	
behind sun end	-3131 Dec 01 j 08:56	16°ML02'00		direct	-3124 Sep 14 j 14:21	10° ∡ ¹26'33	
max. Earth dist.	-3131 Dec 02 j 04:38	16°ML04'56	20.73188 AU				
retrograde	-3130 Mar 20 j 05:03	20°M05'32		conjunction	-3124 Dec 28 j 18:31	14° ∡ 19'36	0°-21'-3
min. Earth dist.	-3130 Jun 05 j 00:31	18°ML08'50	18.75847 AU	minimum elong	-3124 Dec 28 j 18:31	14° ∡ 19'36	0°21'11
opposition	-3130 Jun 06 j 01:46	18°ML06'18	0°00'05	max. Earth dist.	-3124 Dec 29 j 22:10	14° ∡ ¹23'35	21.00249 AU
desc. node	-3130 Jun 14 j 07:42	17°ML46'35		retrograde	-3123 Apr 17 j 20:28	18° ∡ ¹21'34	
direct	-3130 Aug 21 j 10:16	16°ML08'58		min. Earth dist.	-3123 Jul 04 j 01:15	16° ∡ ¹24'53	19.01404 AU
	• •			opposition	-3123 Jul 05 j 03:58		
conjunction	-3130 Dec 05 j 08:49	20°ML06'51	0°-1'-38	direct	-3123 Sep 18 j 20:15	14° ∡ ¹25'54	
minimum elong	-3130 Dec 05 j 08:49	20°ML06'51			1 3		
behind sun begin	-3130 Dec 05 j 02:17			conjunction	-3122 Jan 01 j 23:32	18° ∡ 18'27	0°-23'-58
behind sun end	-3130 Dec 05 j 15:21			minimum elong	-3122 Jan 01 j 23:32		0°24'05
max. Earth dist.	-3130 Dec 06 j 10:47		20 78385 AU	max. Earth dist.	-3122 Jan 03 j 04:30		
retrograde	-3129 Mar 24 j 15:14		20.70303710	retrograde	-3122 Apr 22 j 03:59		21.02303710
opposition	-3129 Jun 10 j 14:05		0°-3'-40	min. Earth dist.	-3122 Jul 08 j 09:20		19 03357 AII
min. Earth dist.	-3129 Jun 09 j 12:06			opposition	-3122 Jul 09 j 12:19		0°-28'-4
direct	-3129 Aug 25 j 19:55		10.00007 AC	direct	-3122 Sep 23 j 03:17		0 -20 -4
direct	-3129 Aug 23 j 19.33	20 11614 30		direct	-3122 Sep 23 J 03.17	10 × 24 34	
conjunction	-3129 Dec 09 j 15:07	240 m 11124	00 51 2	conjunction	-3121 Jan 06 j 04:30	220.716441	0°-26'-46
	,			•	,		
minimum elong	-3129 Dec 09 j 15:07		0°05'09	minimum elong	-3121 Jan 06 j 04:29		
behind sun begin	-3129 Dec 09 j 08:46			max. Earth dist.	-3121 Jan 07 j 08:23		21.04163 AU
behind sun end	-3129 Dec 09 j 21:29	24°M12'28		retrograde	-3121 Apr 26 j 12:13		
max. Earth dist.	-3129 Dec 10 j 18:41		20.83188 AU	opposition	-3121 Jul 13 j 20:10		
retrograde	-3128 Mar 28 j 00:55			min. Earth dist.	-3121 Jul 12 j 17:40		19.04971 AU
min. Earth dist.	-3128 Jun 12 j 23:36			direct	-3121 Sep 27 j 07:46	22° ∡ ¹22'41	
opposition	-3128 Jun 14 j 01:52	26°M16'02	0°-7'-25				
direct	-3128 Aug 29 j 05:56	24°M19'12		conjunction	-3120 Jan 10 j 09:38	26° ҂ 14'32	0°-29'-25
				minimum elong	-3120 Jan 10 j 09:37	26° х¹ 14'32	0°29'32
conjunction	-3128 Dec 12 j 20:55	28° ML $15'13$	0°-8'-23	max. Earth dist.	-3120 Jan 11 j 14:33	26° ≯ 18'40	21.05594 AU
minimum elong	-3128 Dec 12 j 20:56	28°M15'13	0°08'30		-3120 Apr 03 j 22:52	0°ಕ	
behind sun begin	-3128 Dec 12 j 15:10	28°M14'24		retrograde	-3120 Apr 29 j 20:00	0° ට 16'09	
behind sun end	-3128 Dec 13 j 02:41	28°M16'02			-3120 May 26 j 03:01	30°₹ ⋌ ¹	
max. Earth dist.	-3128 Dec 13 j 23:47	28°ML19'08	20.87543 AU	min. Earth dist.	-3120 Jul 16 j 01:02	28° ∡ 19'21	19.06222 AU
	-3127 Jan 12 j 20:02	0° ∡ ¹		opposition	-3120 Jul 17 j 03:40	28° ∡ 16'40	0°-33'-57
retrograde	-3127 Apr 01 j 10:31	2° ∡ 18'25		direct	-3120 Sep 30 j 14:02	26° ₹ '20'31	
min. Earth dist.	-3127 Jun 17 j 10:34	0° ∡ ¹21'58	18.89577 AU		-3119 Jan 10 j 01:41	ರ°0	
opposition	-3127 Jun 18 j 13:09	0° √ 19'19			,		
Tr	-3127 Jun 26 j 15:30	30°R M L		conjunction	-3119 Jan 13 j 14:33	0° ට 12'09	0°-31'-56
direct	-3127 Sep 02 j 14:22			minimum elong	-3119 Jan 13 j 14:33		
	-3127 Nov 04 j 23:32	0°×7		max. Earth dist.	-3119 Jan 14 j 18:11		21.06670 AU
	3127 1107 01 J 23.32	· /		retrograde	-3119 May 04 j 04:15	4°る13'49	21.00070710
conjunction	-3127 Dec 17 j 02:45	2° ҂ 17'50	0°-11'-40	min. Earth dist.	-3119 Jul 20 j 09:11		19.07118 AU
minimum elong	-3127 Dec 17 j 02:45	2° × 17'50		opposition	-3119 Jul 21 j 11:03	2°る14'19	0°-36'-39
behind sun begin	-3127 Dec 17 j 02:45	2° × 17'30	0 11 40	direct	-3119 Oct 04 j 17:57	2 01419 0°る18'12	0 -30 -39
behind sun end	-3127 Dec 10 j 22:03	2° × 17'11		direct	-3119 Oct 04 j 17.37	0 01812	
	•		20.01410.411	:	2110 I 17:20.01	40-200145	00 241 10
max. Earth dist.	-3127 Dec 18 j 06:56		20.91419 AU	conjunction minimum elong	-3118 Jan 17 j 20:01 -3118 Jan 17 j 20:01	4°る09'45 4°る09'45	0°-34'-18
retrograde	-3126 Apr 05 j 19:00	6° ₹ 20'40	00 141 42	Č	-		
opposition	-3126 Jun 22 j 23:44	4° ₹ 21'32		max. Earth dist.	-3118 Jan 19 j 00:24		21.07370 AU
min. Earth dist.	-3126 Jun 21 j 20:58		18.93207 AU	retrograde	-3118 May 08 j 12:27	8° ろ 11'30	00 201 10
direct	-3126 Sep 06 j 23:12	2° ∡ ¹25'02		opposition	-3118 Jul 25 j 17:57	6°る12'01	
	21265 2112211	(0 3 100	00.141.50	min. Earth dist.	-3118 Jul 24 j 16:15		19.07613 AU
conjunction	-3126 Dec 21 j 08:11	6° ∡ 19'24		direct	-3118 Oct 08 j 23:19	4° る 15'57	
minimum elong	-3126 Dec 21 j 08:10	6° √ 19'24	0°15'01			_	
behind sun begin	-3126 Dec 21 j 05:38	6° ≯ 19'03		conjunction	-3117 Jan 22 j 01:37	8° 云 07'30	
behind sun end	-3126 Dec 21 j 10:43	6° ∡ 19'46		minimum elong	-3117 Jan 22 j 01:37	8° る 07'30	
max. Earth dist.	-3126 Dec 22 j 11:25		20.94813 AU	max. Earth dist.	-3117 Jan 23 j 04:14		21.07661 AU
retrograde				retrograde	-3117 May 12 j 21:04	12° る 09'24	
	-3125 Apr 10 j 04:18	10° ∡ ¹21'54		U	· ·		
min. Earth dist.	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05		18.96369 AU	min. Earth dist.	-3117 Jul 29 j 00:26		19.07686 AU
min. Earth dist. opposition	-3125 Apr 10 j 04:18			min. Earth dist.	· ·	10°る12'22	
	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05	8° ∡ ¹25'22		min. Earth dist.	-3117 Jul 29 j 00:26	10°る12'22	
opposition	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46	8° х 25′22 8° х 22′43		min. Earth dist.	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50	10° ප 12'22 10° ප 09'55	
opposition	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46	8° ₹25'22 8° ₹22'43 6° ₹26'17	0°-18'-13	min. Earth dist.	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50	10°පි12'22 10°පි09'55 8°පි13'51	
opposition direct	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46 -3125 Sep 11 j 06:33	8° ₹25'22 8° ₹22'43 6° ₹26'17 10° ₹19'58	0°-18'-13	min. Earth dist. opposition direct	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50 -3117 Oct 13 j 03:18	10°පි12'22 10°පි09'55 8°පි13'51 12°පි05'31	0°-41'-31
opposition direct conjunction	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46 -3125 Sep 11 j 06:33 -3125 Dec 25 j 13:30 -3125 Dec 25 j 13:30	8° ₹25'22 8° ₹22'43 6° ₹26'17 10° ₹19'58 10° ₹19'58	0°-18'-13	min. Earth dist. opposition direct conjunction	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50 -3117 Oct 13 j 03:18 -3116 Jan 26 j 07:39	10° පි12'22 10° පි09'55 8° පි13'51 12° පි05'31 12° පි05'31	0°-41'-31 0°-38'-33 0°38'41
opposition direct conjunction minimum elong max. Earth dist.	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46 -3125 Sep 11 j 06:33 -3125 Dec 25 j 13:30 -3125 Dec 25 j 13:30	8° ₹25'22 8° ₹22'43 6° ₹26'17 10° ₹19'58 10° ₹19'58	0°-18'-13 0°-18'-1 0°18'08	min. Earth dist. opposition direct conjunction minimum elong	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50 -3117 Oct 13 j 03:18 -3116 Jan 26 j 07:39 -3116 Jan 26 j 07:39 -3116 Jan 27 j 10:33	10° පි12'22 10° පි09'55 8° පි13'51 12° පි05'31 12° පි05'31 12° පි09'21	0°-41'-31 0°-38'-33 0°38'41
opposition direct conjunction minimum elong max. Earth dist. retrograde	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46 -3125 Sep 11 j 06:33 -3125 Dec 25 j 13:30 -3125 Dec 25 j 13:30 -3125 Dec 26 j 18:02 -3124 Apr 13 j 11:45	8° ₹25'22 8° ₹22'43 6° ₹26'17 10° ₹19'58 10° ₹24'05 14° ₹22'09	0°-18'-13 0°-18'-1 0°18'08 20.97738 AU	min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50 -3117 Oct 13 j 03:18 -3116 Jan 26 j 07:39 -3116 Jan 27 j 10:33 -3116 May 16 j 05:38	10° පි12'22 10° පි09'55 8° පි13'51 12° පි05'31 12° පි05'31 12° පි09'21 16° පි07'37	0°-41'-31 0°-38'-33 0°38'41 21.07494 AU
opposition direct conjunction minimum elong max. Earth dist.	-3125 Apr 10 j 04:18 -3125 Jun 26 j 07:05 -3125 Jun 27 j 09:46 -3125 Sep 11 j 06:33 -3125 Dec 25 j 13:30 -3125 Dec 25 j 13:30 -3125 Dec 26 j 18:02	8° ₹25'22 8° ₹22'43 6° ₹26'17 10° ₹19'58 10° ₹24'05 14° ₹22'09 12° ₹22'54	0°-18'-13 0°-18'-1 0°18'08 20.97738 AU 0°-21'-38	min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3117 Jul 29 j 00:26 -3117 Jul 30 j 00:50 -3117 Oct 13 j 03:18 -3116 Jan 26 j 07:39 -3116 Jan 26 j 07:39 -3116 Jan 27 j 10:33	10° පි12'22 10° පි09'55 8° පි13'51 12° පි05'31 12° පි05'31 12° පි09'21 16° පි07'37 14° පි10'34	0°-41'-31 0°-38'-33 0°38'41 21.07494 AU 19.07269 AU

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 20

-	nical year style is used: The		_	` //		, .	
direct	-3116 Oct 16 j 08:00			min. Earth dist.	-3108 Sep 02 j 22:18		
	J				-3108 Oct 04 j 09:53		
conjunction	-3115 Jan 29 j 14:00	16° ප 03'56	0°-40'-24	direct	-3108 Nov 17 j 01:40	14° ≈ 13'40	
minimum elong	-3115 Jan 29 j 14:00				-3108 Dec 29 j 18:13		
max. Earth dist.	-3115 Jan 30 j 14:39	16° ප 07'27	21.06830 AU		·		
retrograde	-3115 May 20 j 14:39	20° ට 06'18		conjunction	-3107 Mar 03 j 09:28	18° ≈ 09'52	0°-47'-40
opposition	-3115 Aug 06 j 14:07	18° පි 06'48	0°-45'-37	minimum elong	-3107 Mar 03 j 09:28	18° ≈ 09'52	0°47'45
min. Earth dist.	-3115 Aug 05 j 15:56	18° る 09'02	19.06347 AU	max. Earth dist.	-3107 Mar 03 j 22:08	18° ≈ 11'41	20.83585 AU
direct	-3115 Oct 20 j 12:15	16° ප 10'40		retrograde	-3107 Jun 22 j 18:43	22° ≈ 15′28	
				opposition	-3107 Sep 07 j 17:55	20° ≈ 14'54	0°-52'-42
conjunction	-3114 Feb 02 j 20:56	20°る02'48	0°-42'-4	min. Earth dist.	-3107 Sep 07 j 07:23	20° ≈ 15'59	18.81382 AU
minimum elong	-3114 Feb 02 j 20:56			direct	-3107 Nov 21 j 06:39	18° ≈ 16'59	
max. Earth dist.	-3114 Feb 03 j 21:24		21.05630 AU				
retrograde	-3114 May 24 j 23:55			conjunction	-3106 Mar 07 j 20:35	22° ≈ 14′08	0°-47'-33
opposition	-3114 Aug 10 j 20:37			minimum elong	-3106 Mar 07 j 20:35	22° ≈ 14′08	0°47'38
min. Earth dist.	-3114 Aug 09 j 23:12		19.04856 AU	max. Earth dist.	-3106 Mar 08 j 08:37	22° ≈ 15'52	20.79073 AU
direct	-3114 Oct 24 j 17:18	20°る09'39		retrograde	-3106 Jun 27 j 06:12		
				opposition	-3106 Sep 12 j 00:55		0°-52'-27
conjunction	-3113 Feb 07 j 04:12			min. Earth dist.	-3106 Sep 11 j 15:04		18.76736 AU
minimum elong	-3113 Feb 07 j 04:12			direct	-3106 Nov 25 j 14:12	22° ≈ 21'30	
max. Earth dist.	-3113 Feb 08 j 01:59		21.03861 AU				
retrograde	-3113 May 29 j 08:43			conjunction	-3105 Mar 12 j 08:15	26° ≈ 19'40	0°-47'-11
min. Earth dist.	-3113 Aug 14 j 07:45			minimum elong	,	26° ≈ 19'40	0°47'16
opposition	-3113 Aug 15 j 03:04		0°-48'-50	max. Earth dist.	-3105 Mar 12 j 17:23		20.74309 AU
direct	-3113 Oct 28 j 21:33	24°る09'01			-3105 May 29 j 19:44	0° ∀	
		_		retrograde	-3105 Jul 01 j 17:05	0° ∺ 26'32	
conjunction	-3112 Feb 11 j 11:58	28° る 01'55			-3105 Aug 03 j 20:29	30° R ≈	
minimum elong	-3112 Feb 11 j 11:58			opposition	-3105 Sep 16 j 08:19	28° ≈ 25'47	
max. Earth dist.	-3112 Feb 12 j 09:22		21.01544 AU	min. Earth dist.	-3105 Sep 16 j 00:55		18.71854 AU
	-3112 Mar 18 j 12:09	0° ≈		direct	,	26° ≈ 27'21	
retrograde	-3112 Jun 01 j 18:37	2°≈05'11			-3104 Mar 08 j 03:33	0° ∀	
opposition	-3112 Aug 18 j 09:25	0°≈05'24					
min. Earth dist.	-3112 Aug 17 j 14:52		19.00224 AU	conjunction	-3104 Mar 15 j 20:52	0° ∺ 26'39	
	-3112 Aug 20 j 14:23	30°Rる		minimum elong	-3104 Mar 15 j 20:52	0° ∺ 26'39	
direct	-3112 Nov 01 j 03:29	28° පි 08'48		max. Earth dist.	-3104 Mar 16 j 05:09		20.69314 AU
	-3111 Jan 08 j 09:31	0° ≈		retrograde	-3104 Jul 05 j 05:35	4°) (34'12	
				opposition	-3104 Sep 19 j 16:02	2°) 33′24	
conjunction	-3111 Feb 14 j 19:50		0°-45'-49	min. Earth dist.	-3104 Sep 19 j 09:28		18.66726 AU
minimum elong	-3111 Feb 14 j 19:50	2°≈02'11		direct	-3104 Dec 03 j 04:11	0°) 34'43	
max. Earth dist.	-3111 Feb 15 j 14:40		20.98725 AU		210234 20:10.07	40)/25112	00 451 45
retrograde	-3111 Jun 06 j 03:04	6°≈05'50	00.511.5	conjunction	-3103 Mar 20 j 10:07		0°-45'-45
opposition	-3111 Aug 22 j 15:53	4°≈05'53		minimum elong	-3103 Mar 20 j 10:07	4°) ₹35'12	
min. Earth dist.	-3111 Aug 21 j 23:30		18.97176 AU	max. Earth dist.	-3103 Mar 20 j 15:21		20.64060 AU
direct	-3111 Nov 05 j 07:33	2° ≈ 09'03		retrograde	-3103 Jul 09 j 17:43	8°) 43′31	00.501.4
aanius -ti	2110 E-L 10:04.24	600 00000	0°-46'-37	opposition	-3103 Sep 24 j 00:21	6°) 42′38	0°-50'-4 18.61336 AU
conjunction	-3110 Feb 19 j 04:34	6°≈03'00		min. Earth dist.	-3103 Sep 23 j 20:37		18.61336 AU
minimum elong max. Earth dist.	-3110 Feb 19 j 04:34	6°≈03'00 6°≈05'37	0°46'42 20.95464 AU	direct	-3103 Dec 07 j 11:31	4° ¥ 43'40	
max. Earth dist.	-3110 Feb 19 j 23:02 -3110 Jun 10 j 13:41	6°≈05'37 10°≈07'03	40.73404 AU	conjunction	-3102 Mar 25 j 00:36	80 M 1512	0°-44'-39
opposition	-3110 Jun 10 j 13:41 -3110 Aug 26 j 22:04	8°≈06'56	0°-51'-54	minimum elong	-3102 Mar 25 j 00:36	8° X 45'26	0°-44'-39 0°44'43
min. Earth dist.	-3110 Aug 26 j 22:04 -3110 Aug 26 j 06:28		18.93710 AU	max. Earth dist.	-3102 Mar 25 j 00:36 -3102 Mar 25 j 04:29		20.58528 AU
direct	-3110 Aug 26 j 06:28 -3110 Nov 09 j 14:12	6°≈09'51	10.73 / 10 AU	retrograde	-3102 Mar 23 j 04:29 -3102 Jul 14 j 07:28	8° X 4600 12° X 54'30	20.30320 AU
direct	-3110 NOV 09 j 14.12	0 ~09 31		opposition	-3102 Sup 28 j 08:54	10°) 53'34	0°-48'-44
conjunction	-3109 Feb 23 j 13:37	10° ≈ 04'27	0°-47'-12	min. Earth dist.	-3102 Sep 28 j 06:19		18.55645 AU
minimum elong	-3109 Feb 23 j 13:37	10 ≈0427 10°≈04'27	0°47'18	direct	-3102 Sep 28 j 00:19	8° X 54'18	16.55045 AU
max. Earth dist.	-3109 Feb 24 j 05:23		20.91819 AU	direct	5102 Dec 11 J 20.55	o 八 3418	
retrograde	-3109 Jun 14 j 22:14	10 ≈00 42 14°≈08'58	20.71017 AU	conjunction	-3101 Mar 29 j 15:49	12°¥ 57'23	0°-43'-19
opposition	-3109 Juli 14 j 22.14 -3109 Aug 31 j 04:34	14 ≈08 38 12°≈08'42	0°-52'-25	minimum elong	-3101 Mar 29 j 15:49		
min. Earth dist.	-3109 Aug 31 j 04:34		18.89898 AU	max. Earth dist.	-3101 Mar 29 j 16:20		
direct	-3109 Aug 30 j 13:10	12 ≈10 04 10°≈11'20	10.07070 AU	retrograde	-3101 Mai 29 j 10:20		20.52062 AU
ancei	5107 110V 15 J 10.29	10 ~11 20		opposition	-3101 Jul 18 j 20:23		0°-47'-8
conjunction	-3108 Feb 27 j 23:16	14°2206'41	0°-47'-33	min. Earth dist.	-3101 Oct 02 j 18:45		
minimum elong	-3108 Feb 27 j 23:16		0°47'38	direct	-3101 Oct 02 j 18.45		10.7707 / AU
max. Earth dist.	-3108 Feb 27 j 23.10 -3108 Feb 28 j 14:39		20.87845 AU	direct	5101 Dec 10 J 05.45	15 7(0030	
man. Barui UISt.	-3108 Feb 28 j 14:39 -3108 Mar 14 j 14:42		20.07043 AU	conjunction	-3100 Apr 02 j 07:50	17°¥11'02	0°-41'-43
retrograde	-3108 Mai 14 j 14.42 -3108 Jun 18 j 09:07			minimum elong	-3100 Apr 02 j 07:50		
opposition	-3108 Jun 18 j 09:07 -3108 Sep 03 j 11:05		0°-52'-41	max. Earth dist.	-3100 Apr 02 j 07:30 -3100 Apr 02 j 06:45		
оррознин	5100 Sep 05 J 11.05	10 ~11 10	J J2-71	max. Lattii Uist.	5100 Apr 02 J 00.43	17 / 10 33	20.70330 AU

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3100 in astronomical counting style is the year 3101 BCE in historical counting style. -3100 Jul 22 j 11:16 21°**)** €21'41 retrograde min. Earth dist. -3092 Nov 09 i 22:17 24°**Υ**14'29 17.89784 AU -3100 Oct 06 j 04:03 19° ¥20'32 0°-45'-15 direct -3091 Jan 23 j 06:36 22°**Y**12'50 opposition min. Earth dist. -3100 Oct 06 j 05:36 19° **€**20'22 18.43348 AU -3100 Dec 19 j 17:07 17° **€** 20'33 -3091 May 13 j 20:18 26°**Υ**'30'52 0°-17'-43 direct conjunction $-3091 \text{ May } 13 \text{ j } 20:18 \quad 26^{\circ} \Upsilon 30'52 \quad 0^{\circ} 17'42$ minimum elong -3091 May 13 j 00:29 26°**Υ**27'53 19.86670 AU -3099 Apr 07 j 00:44 21° ¥26'23 0°-39'-53 conjunction max. Earth dist. -3099 Apr 07 j 00:44 21°**米**26'23 0°39'56 -3091 Jul 19 j 17:04 minimum elong 0°႘ -3099 Apr 06 j 20:23 21°**米**25'45 20.40105 AU -3091 Aug 31 j 18:52 0°848'30 max. Earth dist. retrograde -3099 Jul 27 j 00:44 25°**)** 37'48 -3091 Oct 14 j 12:04 retrograde 30°**Ŗ**♈ -3099 Oct 10 j 14:21 23° ¥ 36'31 0°-43'-6 -3091 Nov 13 j 22:29 28°**Y**46'20 0°-17'-45 opposition opposition -3091 Nov 14 j 16:03 28°**Y**44'26 17.83615 AU min. Earth dist. -3099 Oct 10 j 18:59 23° ¥36'02 18.36800 AU min. Earth dist. -3090 Jan 27 j 22:25 26°**Υ**'42'43 -3099 Dec 24 j 03:14 21° **∺** 36'07 direct direct -3090 May 01 j 12:30 0°8 conjunction -3098 Apr 11 j 18:36 25° **X** 43'24 0°-37'-50 minimum elong -3098 Apr 11 j 18:36 25°**)** 43'24 0°37'51 conjunction -3090 May 18 j 20:19 1°802'18 0°-14'-12 max. Earth dist. -3098 Apr 11 j 12:28 25° **X** 42'31 20.33462 AU minimum elong -3090 May 18 j 20:19 1°**8**02'18 0°14'10 retrograde -3098 Jul 31 j 16:48 29° **∺** 55'36 behind sun begin -3090 May 18 j 17:16 1°801'51 opposition -3098 Oct 15 j 01:06 27° **¥** 54'09 0°-40'-42 behind sun end -3090 May 18 j 23:22 1°802'45 min. Earth dist. -3098 Oct 15 j 06:46 27° \(\) 53'33 18.30063 AU max. Earth dist. -3090 May 17 j 22:14 0°**と**58'58 19.80617 AU direct -3098 Dec 28 j 16:32 25° ¥ 53'20 retrograde -3090 Sep 05 j 15:41 5°820'42 -3097 Apr 15 j 22:50 $0^{\circ}\Upsilon$ opposition -3090 Nov 18 j 14:49 3°818'30 0°-13'-45 min. Earth dist. -3090 Nov 19 i 09:04 3°816'31 17.77670 AU conjunction -3097 Apr 16 j 13:01 0°Υ02'05 0°-35'-32 direct -3089 Feb 01 i 17:40 1°**8**14'35 minimum elong -3097 Apr 16 j 13:01 0°**Υ**02'05 0°35'34 -3097 Apr 16 j 04:02 max. Earth dist. 0°**Υ**'00'46 20.26654 AU conjunction -3089 May 23 j 21:02 5°**8**35'42 0°-10'-34 retrograde -3097 Aug 05 j 07:01 4°Y15'03 -3089 May 23 j 21:02 5°**8**35'42 0°10'31 minimum elong -3097 Oct 19 j 12:30 2°Υ13'27 0°-38'-3 behind sun begin -3089 May 23 j 15:48 5°**8**34'56 opposition -3097 Oct 19 j 21:02 2°Υ12'33 18.23215 AU -3089 May 24 j 02:16 5°**8**36'29 min. Earth dist. behind sun end -3096 Jan 02 j 03:57 0°Υ12'11 -3089 May 22 j 22:07 5°**8**32'14 19.74763 AU direct max. Earth dist. -3089 Sep 10 j 11:43 9°**8**54'48 retrograde 4°Υ22'26 0°-33'-2 -3089 Nov 23 j 08:08 -3096 Apr 20 j 08:17 7°**8**52'37 0°-9'-39 conjunction opposition min. Earth dist. -3096 Apr 20 j 08:17 4°**Υ**′22'26 0°33'03 -3089 Nov 24 j 04:23 7°**8**50'24 17.71923 AU minimum elong -3096 Apr 19 j 21:36 4°**Υ**20'51 20.19788 AU -3088 Feb 06 j 11:44 max. Earth dist. direct 5°**8**48'23 -3096 Aug 09 j 00:16 8°Y36'11 retrograde -3096 Oct 23 j 00:20 6°**Y**34'26 0°-35'-11 -3088 May 27 j 22:24 10°8 10'59 0°-6'-50 opposition conjunction -3088 May 27 j 22:24 10°**8**10'59 -3096 Oct 23 j 09:38 6°**Y**33'26 18.16339 AU 0°06'47 min. Earth dist. minimum elong -3095 Jan 05 j 18:26 4°**Y**32'43 -3088 May 27 j 16:06 10°**8**10'03 direct behind sun begin behind sun end -3088 May 28 j 04:43 10°**8**11'56 8°**Υ**44'29 0°-30'-20 conjunction -3095 Apr 25 j 04:17 max. Earth dist. -3088 May 26 j 20:57 10°**8**07'07 19.69120 AU minimum elong -3095 Apr 25 j 04:17 8°**Y**44'29 0°30'20 retrograde -3088 Sep 14 j 09:07 14°**8**30'45 max. Earth dist. -3095 Apr 24 j 15:15 8°**Y**42'34 20.12913 AU opposition -3088 Nov 27 j 02:04 12°**8**28'32 0°-5'-27 retrograde -3095 Aug 13 j 16:13 12°**Υ**59'01 min. Earth dist. -3088 Nov 27 j 23:11 12°**8**26'14 17.66389 AU -3095 Oct 27 j 13:00 10°**Υ**57'08 0°-32'-5 -3087 Feb 10 j 09:19 10°**8**23'59 opposition direct min. Earth dist. -3095 Oct 28 j 00:56 10°**Υ**55'51 18.09495 AU max. Earth dist. -3087 May 31 j 22:36 14°844'02 19.63675 AU -3094 Jan 10 j 07:24 8°**Ƴ**54'59 direct -3094 Apr 29 j 10:16 13°γ′06'05 20.06114 AU -3087 Jun 02 j 00:37 14°848'01 0°-3'-2 max. Earth dist. conjunction -3087 Jun 02 j 00:36 14°**8**48'00 minimum elong -3094 Apr 30 i 01:09 13°**Υ**'08'17 0°-27'-26 -3087 Jun 01 j 17:50 14°**8**47'00 conjunction behind sun begin -3094 Apr 30 j 01:09 13° Υ 08'17 -3087 Jun 02 j 07:22 14°849'01 minimum elong 0°27'25 behind sun end -3094 Aug 18 i 10:34 17°**Y**23'37 retrograde -3087 Jun 05 i 06:58 15°₩ opposition -3094 Nov 01 i 02:08 15°**Υ**'21'36 0°-28'-46 retrograde -3087 Sep 19 j 06:01 19°808'21 min. Earth dist. -3094 Nov 01 j 14:39 15°**Υ**20'15 18.02751 AU opposition -3087 Dec 01 j 21:00 17°806'07 0°-1'-11 direct -3093 Jan 14 j 23:04 13°**Υ**19'02 min. Earth dist. -3087 Dec 02 j 19:47 17°**8**03'38 17.61052 AU -3086 Feb 15 j 05:52 15°**8**01'16 direct -3093 May 04 j 22:47 17°**Υ**'33'55 0°-24'-21 conjunction asc. node -3086 Mar 15 j 08:49 15°**8**22'05 -3093 May 04 j 22:47 17°**Υ**'33'55 0°24'20 minimum elong max. Earth dist. -3086 Jun 05 j 22:35 19°**8**22'14 19.58455 AU -3093 May 04 j 06:09 17° **Y**31'26 19.99434 AU max. Earth dist. -3093 Aug 23 j 04:12 21°**Υ**50′01 retrograde -3086 Jun 07 j 03:07 19°**8**26'36 0°00'54 conjunction -3093 Nov 05 j 16:15 19°**Y**47'55 0°-25'-16 -3086 Jun 07 j 03:05 19°**8**26'36 0°00'59 opposition minimum elong -3093 Nov 06 j 07:04 19°**Υ**46'19 17.96165 AU -3086 Jun 06 j 20:19 19°**8**25'35 min. Earth dist. behind sun begin -3092 Jan 19 j 13:18 17°**Y**44'58 -3086 Jun 07 j 09:52 19°**8**27'37 direct behind sun end -3086 Sep 24 j 04:03 23°847'29 retrograde -3092 May 08 j 21:00 22°**Y**′01′24 0°-21′-7 -3086 Dec 06 j 16:36 21°845'12 0°03'06 conjunction opposition -3086 Dec 07 j 16:14 21°842'37 17.55969 AU minimum elong -3092 May 08 j 21:00 22°**Υ**01'25 0°21'06 min. Earth dist. max. Earth dist. -3092 May 08 j 02:28 21°**Υ**58'38 19.92952 AU direct -3085 Feb 20 j 05:29 19°**8**40'02 retrograde -3092 Aug 27 j 00:00 26°**Y**18'18 max. Earth dist. -3085 Jun 11 j 01:43 24°802'14 19.53506 AU

-3092 Nov 09 j 06:57 24°**Y**16'08 0°-21'-35

opposition

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3085 in astronomical counting style is the year 3086 BCE in historical counting style. -3085 Jun 12 j 06:09 24°**8**06'37 0°04'48 -3078 Sep 01 i 12:48 conjunction -3085 Jun 12 j 06:09 24°**8**06'37 0°04'52 -3078 Oct 31 j 21:36 1°936'59 minimum elong retrograde -3085 Jun 11 j 23:33 24°**8**05'37 -3077 Jan 03 j 11:23 30°R **Ⅱ** behind sun begin -3085 Jun 12 j 12:45 24°**8**07'36 -3077 Jan 13 j 04:46 29°**Ⅲ**34'46 0°34'50 behind sun end opposition -3077 Jan 14 j 05:53 29°**Ⅲ**32'02 17.31172 AU -3085 Sep 29 j 01:54 28°827'57 min. Earth dist. retrograde -3085 Dec 11 j 12:58 26°825'38 0°07'24 -3077 Mar 30 j 14:47 27°**Ⅲ**28'07 opposition direct -3085 Dec 12 j 13:35 26°822'57 17.51178 AU -3077 Jun 18 j 08:59 min. Earth dist. 000 -3084 Feb 25 j 04:19 24°**8**20'10 -3077 Jul 20 j 05:48 direct max. Earth dist. 1°556'13 19.30831 AU max. Earth dist. -3084 Jun 15 j 02:48 28°**8**43'10 19.48891 AU -3077 Jul 21 j 09:51 2°**©**00'38 conjunction 0°32'43 -3077 Jul 21 j 09:50 conjunction -3084 Jun 16 j 09:15 28°**8**47'52 0°08'38 minimum elong 2°9500'38 0°32'49 -3084 Jun 16 j 09:15 28°**8**47'52 -3077 Nov 05 j 23:16 minimum elong 0°08'43 retrograde 6°9523'30 -3084 Jun 16 j 03:25 28°846'59 -3076 Jan 18 j 05:36 behind sun begin opposition 4°9521'26 0°38'02 behind sun end -3084 Jun 16 j 15:05 28° **8**48'45 min. Earth dist. -3076 Jan 19 j 05:06 4°**ॐ**18′52 17.30723 AU -3084 Jul 06 j 00:38 Π $^{\circ}0$ direct -3076 Apr 03 j 18:58 2°9514'50 retrograde -3084 Oct 03 j 00:16 3°**Ⅱ**09'37 max. Earth dist. -3076 Jul 24 j 10:11 6°543'19 19.30670 AU opposition -3084 Dec 15 j 09:58 1°**II**07'15 0°11'40 min. Earth dist. -3084 Dec 16 j 11:23 1°**I**I04'29 17.46758 AU conjunction -3076 Jul 25 j 12:58 6°5947'32 0°35'28 -3083 Jan 11 j 11:33 30°R8 minimum elong -3076 Jul 25 j 12:58 6°5947'32 0°35'35 direct -3083 Mar 01 j 04:57 29°801'28 retrograde -3076 Nov 09 j 22:03 11°**©**10'19 9°508'23 -3083 Apr 17 j 22:36 Π °0 opposition -3075 Jan 22 j 07:07 0°40'58 max. Earth dist. -3083 Jun 20 i 06:57 3°**Ц**25'36 19.44666 AU min. Earth dist. -3075 Jan 23 i 06:57 9°**©**05'47 17.30845 AU direct -3075 Apr 08 j 21:26 7°9501'52 conjunction -3083 Jun 21 j 12:52 3°**II**30'14 0°12'25 -3083 Jun 21 j 12:52 3°**II**30'14 0°12'31 conjunction -3075 Jul 30 j 15:43 11°534'36 0°37'59 minimum elong -3083 Jun 21 j 08:35 3°**Ⅱ**29'35 -3075 Jul 30 j 15:43 11°534'35 0°38'05 behind sun begin minimum elong -3083 Jun 21 j 17:08 3°**Ⅲ**30′53 -3075 Jul 29 j 13:26 11°\$30'26 19.31062 AU behind sun end max. Earth dist. -3083 Oct 07 j 23:17 7°**Ⅲ**52'18 -3075 Nov 14 j 23:19 15°557'12 retrograde retrograde -3083 Dec 20 j 07:34 5°**Ⅱ**49'55 0°15'52 -3074 Jan 27 j 08:51 13°555'24 0°43'37 opposition opposition 5°**Ⅱ**47'06 17.42749 AU -3074 Jan 28 j 06:51 13°\$53'01 17.31489 AU -3083 Dec 21 j 09:15 min. Earth dist. min. Earth dist. -3074 Apr 14 j 03:13 11°549'01 -3082 Mar 06 j 05:53 3°**Ⅱ**43'52 direct direct -3082 Jun 25 j 09:16 8°**Д**08'42 19.40895 AU max. Earth dist. -3074 Aug 04 j 18:15 16°\$21'35 0°40'13 conjunction -3074 Aug 04 j 18:15 16°\$21'35 0°40'19 -3082 Jun 26 j 16:26 8°II13'33 0°16'08 conjunction minimum elong -3074 Aug 03 j 17:52 16°517'44 19.31952 AU -3082 Jun 26 j 16:26 8°**Ⅱ**13'33 minimum elong max. Earth dist. -3082 Oct 12 j 21:52 12°**I**35'54 -3074 Nov 19 j 21:47 20°543'57 retrograde retrograde -3082 Dec 25 j 05:55 10°**Ⅲ**33'29 0°19'58 -3073 Feb 01 j 11:07 18°9542'16 0°45'58 opposition opposition min. Earth dist. -3082 Dec 26 j 08:12 10°**Ц**30'37 17.39246 AU min. Earth dist. -3073 Feb 02 j 09:08 18°\$39'53 17.32624 AU direct -3081 Mar 11 j 06:54 8°**Ⅲ**27'11 direct -3073 Apr 19 j 06:53 16°€36'00 -3081 Jul 01 j 19:57 12°**I**57'41 0°19'45 conjunction conjunction -3073 Aug 09 j 20:01 21°508'15 0°42'11 -3081 Jul 01 j 19:57 12°**Ⅲ**57'41 0°19'51 -3073 Aug 09 j 20:01 21°508'15 0°42'17 minimum elong minimum elong max. Earth dist. -3081 Jun 30 j 13:50 12°**Д**52'59 19.37657 AU max. Earth dist. -3073 Aug 08 j 19:58 21°504'27 19.33325 AU -3081 Oct 17 j 22:21 17°**Ⅲ**20'15 -3073 Nov 24 j 22:18 25°530'18 retrograde retrograde -3081 Dec 30 j 04:48 15°**Ⅱ**17'50 0°23'56 -3072 Feb 06 j 13:20 23°\$28'43 0°48'00 opposition opposition -3081 Dec 31 j 06:28 15° **II** 15'02 17.36289 AU min. Earth dist. min. Earth dist. -3072 Feb 07 i 09:23 23°\$26'33 17.34221 AU -3080 Mar 15 j 09:15 13°**Ⅲ**11'22 direct direct -3072 Apr 23 j 12:40 21°522'35 -3080 Jul 05 j 23:33 17°**II**42'32 0°23'14 -3072 Aug 13 j 21:32 25°\$54'22 0°43'51 conjunction conjunction -3080 Jul 05 i 23:33 17°**II**42'32 0°23'20 minimum elong -3072 Aug 13 i 21:32 25°\$54'22 0°43'56 minimum elong -3080 Jul 04 j 17:04 17°**I**I37'46 19.34994 AU max. Earth dist. max. Earth dist. -3072 Aug 12 j 23:50 25°\$50'56 19.35139 AU retrograde -3080 Oct 21 j 20:59 22° **I**I 05'16 -3072 Nov 05 j 02:13 $0^{\circ}\Omega$ -3079 Jan 03 j 04:10 20°**Ⅲ**02'53 0°27'46 retrograde -3072 Nov 28 j 20:44 opposition 0°Ω15'59 -3079 Jan 04 j 06:17 20°**耳**00'01 17.33949 AU -3072 Dec 23 j 03:39 30°Rூ min. Earth dist. direct -3079 Mar 20 j 10:07 17°**Ⅲ**56'16 opposition -3071 Feb 10 j 15:41 28°5014'30 0°49'41 max. Earth dist. -3079 Jul 09 j 21:42 22°**Д**23'24 19.32970 AU min. Earth dist. -3071 Feb 11 j 11:23 28°512'23 17.36249 AU -3071 Apr 28 j 16:25 26°€08'31 direct -3079 Jul 11 j 03:11 22° **1**28'02 0°26'35 -3071 Aug 08 j 10:32 0° Ω conjunction -3079 Jul 11 j 03:10 22°**Ⅲ**28'02 0°26'40 minimum elong -3079 Oct 26 j 22:40 26° **1**50'52 -3071 Aug 18 j 22:14 0°**Ω**39'41 0°45'13 retrograde conjunction -3078 Jan 08 j 04:10 24°**II**48'33 0°31'24 -3071 Aug 18 j 22:14 opposition minimum elong 0°**ん**39'41 0°45'18 min. Earth dist. -3078 Jan 09 j 04:59 24°**II**45'50 17.32237 AU max. Earth dist. -3071 Aug 18 j 00:56 0°**Ω**36'19 19.37396 AU direct -3078 Mar 25 j 13:20 22°**Ⅲ**41'53 retrograde -3071 Dec 03 j 20:41 5°**Ω**00′50 max. Earth dist. -3078 Jul 15 j 01:41 27°**Ⅲ**09'33 19.31577 AU opposition -3070 Feb 15 j 18:03 2°**Ω**59'25 0°51'01 min. Earth dist. -3070 Feb 16 j 11:42 2°**Ω**57'32 17.38725 AU -3078 Jul 16 j 06:35 27°**Ⅱ**14'06 0°29'45 -3070 May 03 j 21:07 0°**Ω**53'34 conjunction direct

-3078 Jul 16 j 06:35 27°**Ⅲ**14'06 0°29'51

minimum elong

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3070 in astronomical counting style is the year 3071 BCE in historical counting style. -3070 Aug 23 j 22:14 5°Ω23'58 0°46'15 conjunction -3062 Sep 29 i 15:19 12° m 26'58 0°43'28 conjunction minimum elong -3070 Aug 23 j 22:13 5°Ω23'58 0°46'20 -3062 Sep 29 j 15:19 12° mp 26'58 0°43'30 minimum elong -3070 Aug 23 j 03:50 5°**Ω**21'04 19.40094 AU max. Earth dist. -3062 Sep 29 j 14:48 12° m 26'53 19.78396 AU max. Earth dist. -3070 Dec 08 j 18:56 9°**Ω**44'34 -3061 Jan 14 j 18:02 16° mp 42'03 retrograde retrograde 0°47'29 -3069 Feb 20 j 20:27 7°**Ω**43'13 0°52'00 -3061 Mar 31 j 04:08 14° mp 41'37 opposition opposition -3061 Mar 31 j 02:55 14° mp 41'45 17.81576 AU min. Earth dist. -3069 Feb 21 j 13:00 7°**Ω**41'27 17.41639 AU min. Earth dist. -3061 Jun 16 j 12:34 12° Mp 38'44 direct -3069 May 09 j 00:23 5°**Ω**37'33 direct -3069 Aug 28 j 21:20 10° **\Omega** 07'02 0° 46'59 conjunction -3061 Oct 04 j 07:45 16° m 57'58 0°41'50 conjunction -3061 Oct 04 j 07:45 16° m 57'58 0°41'52 minimum elong -3069 Aug 28 j 21:20 10°**Ω**07'02 0°47'04 minimum elong -3061 Oct 04 j 09:19 16° M 58'12 19.84810 AU max. Earth dist. -3069 Aug 28 j 03:46 10°**Ω**04'16 19.43246 AU max. Earth dist. -3069 Dec 13 j 18:00 $14^{\circ}\Omega$ 27'02 -3060 Jan 19 j 11:27 21° Mp 12'17 retrograde retrograde -3068 Feb 25 j 22:23 12° Ω 25'43 0°52'38 -3060 Apr 04 j 03:07 19° m 12'01 0°45'30 opposition opposition min. Earth dist. -3068 Feb 26 j 12:53 12°Ω24'11 17.45029 AU min. Earth dist. -3060 Apr 04 j 00:54 19° Mp 12'15 17.88073 AU direct -3068 May 13 j 03:45 10°**Ω**20'13 direct -3060 Jun 20 j 10:10 17° Mp 09'34 conjunction -3068 Sep 01 j 19:45 14° **Ω**48'42 0°47'23 conjunction -3060 Oct 07 j 23:23 21° m 27'18 0°39'57 minimum elong -3068 Sep 01 j 19:45 14° **Ω**48'42 0°47'28 minimum elong -3060 Oct 07 j 23:23 21° m 27'18 0°39'57 max. Earth dist. -3068 Sep 01 j 05:20 14°Ω46'26 19.46874 AU max. Earth dist. -3060 Oct 08 j 02:53 21° m 27'50 19.91369 AU -3068 Sep 04 j 19:22 15°Ω retrograde -3059 Jan 23 j 05:59 25° mp 40'50 retrograde -3068 Dec 17 j 15:39 $19^{\circ}\Omega$ 08'03 opposition -3059 Apr 09 j 01:35 23° mp 40'43 0°43'15 opposition $-3067 \text{ Mar } 02 \text{ j } 00:18 \quad 17^{\circ} \Omega 06'48 \quad 0^{\circ}52'54$ min. Earth dist. -3059 Apr 08 j 20:26 23° mp 41'15 17.94664 AU min. Earth dist. $-3067 \text{ Mar } 02 \text{ j } 12.58 \quad 17^{\circ} \Omega 05'27 \quad 17.48887 \text{ AU}$ direct -3059 Jun 25 j 09:07 21° Mp 38'43 -3067 May 18 j 06:34 15°**Ω**01'32 direct conjunction -3059 Oct 12 j 14:08 25° m 54'53 0°37'50 $-3067 \text{ Sep } 06 \text{ j } 17:04 \quad 19^{\circ} \Omega 28'53 \quad 0^{\circ} 47'29$ -3059 Oct 12 i 14:08 25° m 54'53 0°37'50 conjunction minimum elong $-3067 \text{ Sep } 06 \text{ j } 17:04 \quad 19^{\circ} \Omega 28'53 \quad 0^{\circ} 47'32$ max. Earth dist. -3059 Oct 12 j 19:50 25° m 55'46 19.97980 AU minimum elong -3067 Sep $06 \text{ j } 04:02 \quad 19^{\circ} \Omega 26'50 \quad 19.50985 \text{ AU}$ -3058 Jan 10 j 23:53 0∘**⊽** max. Earth dist. -3067 Dec 22 j 13:32 23°**Ω**47'34 -3058 Jan 27 j 21:56 0°**م**07'39 retrograde retrograde -3066 Mar 07 j 01:56 $21^{\circ}\Omega$ 46'22 $0^{\circ}52'49$ -3058 Feb 14 j 04:20 30°R Mg opposition -3066 Mar 07 j 12:26 21° **Q**45'15 17.53256 AU -3058 Apr 13 j 23:39 28° m 07'39 0°40'45 min. Earth dist. opposition -3066 May 23 j 08:53 19° **\Omega**41'23 min. Earth dist. -3058 Apr 13 j 17:37 28° Mp 08'16 18.01293 AU direct -3058 Jun 30 j 04:49 26° M 06'03 direct -3066 Sep 11 j 13:43 24° **Ω**07'32 0°47'16 -3058 Oct 11 j 13:30 0∘**⊽** conjunction -3066 Sep 11 j 13:43 $24^{\circ}\Omega07'32$ $0^{\circ}47'20$ minimum elong -3066 Sep 11 j 03:56 24° **Ω**05'59 19.55610 AU -3058 Oct 17 j 04:08 0°**2**20'38 0°35'30 max. Earth dist. conjunction -3066 Dec 27 j 10:24 28° **Ω**25'30 -3058 Oct 17 j 04:08 retrograde minimum elong 0°**2**20'38 0°35'30 opposition -3065 Mar 12 j 03:10 26° **Ω**24'25 0°52'24 max. Earth dist. -3058 Oct 17 j 11:21 0°**£**21'45 20.04613 AU min. Earth dist. -3065 Mar 12 j 11:07 26° **Ω**23'35 17.58118 AU retrograde -3057 Feb 01 j 15:29 4°**£**32'35 direct -3065 May 28 j 10:59 24°**Q**19'47 opposition -3057 Apr 18 j 20:40 2°**2**32'41 0°38'02 min. Earth dist. -3057 Apr 18 j 11:47 2°**2**33'36 18.07909 AU -3065 Sep 16 j 09:19 28° **Ω**44'39 0°46'45 -3057 Jul 05 j 01:41 0°**£**31'29 conjunction direct -3065 Sep 16 j 09:18 28° **Ω**44'39 0°46'48 minimum elong max. Earth dist. -3065 Sep 16 j 01:16 28° **Ω**43'23 19.60717 AU -3057 Oct 21 j 17:18 4°**£**44'29 0°32'58 conjunction -3065 Oct 06 j 16:38 -3057 Oct 21 j 17:19 4°**△**44'29 0°32'58 0° My minimum elong -3064 Jan 01 i 07:06 -3057 Oct 22 i 02:48 4°**2**45'55 20.11203 AU retrograde 3° m 01'55 max. Earth dist. -3064 Mar 16 j 04:02 -3056 Feb 06 i 06:05 opposition 1° m 00'59 0°51'39 retrograde 8°**£**55'36 -3064 Mar 16 i 10:06 min. Earth dist. 1° m 00'20 17.63454 AU opposition -3056 Apr 22 j 17:11 6°**£**55'46 0°35'07 -3064 Apr 10 j 10:15 30°RΩ min. Earth dist. -3056 Apr 22 i 07:35 6°**2**56'45 18.14476 AU direct -3064 Jun 01 i 11:36 28° Ω 56'43 direct -3056 Jul 08 j 19:45 4°**£**54'55 -3064 Jul 21 j 12:14 0° m -3056 Oct 25 j 05:30 9°**2**06'19 0°30'16 conjunction -3064 Sep 20 j 04:13 3° mb 20'16 0° 45'56 -3056 Oct 25 j 05:30 9°**2**06'19 0°30'15 conjunction minimum elong -3064 Sep 20 j 04:13 -3056 Oct 25 j 16:18 minimum elong 3° m 20'16 0°45'59 max. Earth dist. 9°**೨**07'57 20.17751 AU -3064 Sep 19 j 23:07 19.66269 AU max. Earth dist. 3° Mp 19'28 retrograde -3055 Feb 09 j 22:12 13°**△**16'37 -3063 Jan 05 j 03:18 retrograde 7° m 36'49 opposition -3055 Apr 27 j 12:45 11°**£**16'49 0°32'00 opposition -3063 Mar 21 j 04:24 5° m 36'03 0°50'34 min. Earth dist. -3055 Apr 27 j 00:17 11°**△**18'05 18.20995 AU min. Earth dist. -3063 Mar 21 j 07:39 5° Mp 35'42 17.69182 AU direct -3055 Jul 13 j 14:41 9°**₽**16'19 -3063 Jun 06 j 12:56 3°m/32'14 direct -3055 Oct 29 j 16:57 13°**Ω**26'06 0°27'24 conjunction -3063 Sep 24 j 22:12 7° m 54'23 0°44'51 -3055 Oct 29 j 16:57 13°**£**26'06 conjunction minimum elong 0°27'23 minimum elong -3063 Sep 24 j 22:12 7° **m** 54'23 0°44'53 max. Earth dist. -3055 Oct 30 j 06:22 13°**2**28'08 20.24247 AU max. Earth dist. -3063 Sep 24 j 19:08 7° Mp 53'54 19.72180 AU retrograde -3054 Feb 14 j 11:53 17°**2**35'36 retrograde -3062 Jan 09 j 22:30 12° M 10'13 opposition -3054 May 02 j 07:43 15°**△**35'49 0°28'45 opposition -3062 Mar 26 j 04:34 10° m 09'37 0°49'10 min. Earth dist. -3054 May 01 j 18:23 15°**2**37'11 18.27483 AU min. Earth dist. -3062 Mar 26 j 06:18 10° M 09'26 17.75257 AU direct -3054 Jul 18 j 07:25 13° **2**35'39

-3062 Jun 11 j 12:16

direct

8° m 06'15

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3054 in astronomical counting style is the year 3055 BCE in historical counting style. -3054 Nov 03 j 03:27 17°**2**43'52 0°24'25 direct -3047 Aug 17 j 08:44 13°ML02'10 conjunction -3054 Nov 03 j 03:27 17°**2**43'52 -3047 Oct 26 j 14:48 15°M minimum elong 0°24'24 max. Earth dist. -3054 Nov 03 j 18:08 17° **2**46'04 20.30728 AU -3053 Feb 19 j 02:43 21° **2**52'35 -3047 Dec 01 j 12:42 17° ML01'06 0°01'22 retrograde conjunction -3047 Dec 01 j 12:42 17° ML01'06 -3053 May 06 j 09:30 19°**2**54'28 18.33955 AU 0°01'19 min. Earth dist. minimum elong -3053 May 07 j 01:41 19°**♀**52'49 -3047 Dec 01 j 06:10 17°ML00'10 opposition 0°25'21 behind sun begin -3053 Jul 23 j 00:07 17°**♀**52'59 -3047 Dec 01 j 19:14 17°ML02'02 direct behind sun end -3047 Dec 02 j 14:36 17°ML04'54 20.73684 AU max. Earth dist. -3046 Mar 20 j 14:01 21°M 05'27 -3053 Nov 07 j 13:24 21°**£**59'41 0°21'20 conjunction retrograde -3053 Nov 07 j 13:24 21°**⊆**59'41 0°21'17 minimum elong desc. node -3046 Apr 24 j 01:19 20° M-37'41 max. Earth dist. -3053 Nov 08 j 06:43 22°**£**02'17 20.37179 AU min. Earth dist. -3046 Jun 05 j 10:23 19°ML08'46 18.76326 AU -3052 Feb 23 j 15:00 26°**♀**07'38 -3046 Jun 06 j 11:15 19°ML06'17 retrograde opposition 0°00'-26 -3052 May 10 j 18:51 24°**♀**07'55 -3046 Aug 21 j 19:35 17°ML08'57 opposition 0°21'51 direct min. Earth dist. -3052 May 10 j 01:45 24°**Ω**09'39 18.40400 AU direct -3052 Jul 26 j 15:42 22°**♀**08'27 conjunction -3046 Dec 05 j 19:09 21°M06'49 0°-2'-7 -3046 Dec 05 j 19:09 21°M06'49 minimum elong 0°02'13 conjunction -3052 Nov 10 j 22:34 26° **2**13'41 0°18'09 behind sun begin -3046 Dec 05 j 12:37 21°M05'53 minimum elong -3052 Nov 10 j 22:34 26°**£**13'41 0°18'06 behind sun end -3046 Dec 06 j 01:41 21°ML07'45 max. Earth dist. -3052 Nov 11 j 16:52 26° **2**16'25 20.43615 AU max. Earth dist. -3046 Dec 06 j 20:42 21°ML10'34 20.78829 AU 0°M -3051 Jan 29 j 10:28 retrograde -3045 Mar 25 j 01:42 25° 11.10'44 retrograde -3051 Feb 27 j 05:07 0°M20'56 opposition -3045 Jun 10 j 23:42 23°M 11'37 -3051 Mar 28 i 14:28 30°R € min. Earth dist. -3045 Jun 09 j 21:59 23°ML14'11 18.81264 AU opposition -3051 May 15 i 11:20 28° **2**21'17 0°18'16 direct -3045 Aug 26 j 05:43 21°M14'32 min. Earth dist. -3051 May 14 i 15:35 28° **2**23'16 18.46814 AU direct -3051 Jul 31 j 06:11 26° **2**22'10 conjunction -3045 Dec 10 i 01:28 25° ML11'27 0°-5'-31 -3045 Dec 10 j 01:27 25°ML11'27 -3051 Nov 08 j 00:41 minimum elong 0°05'37 behind sun begin -3045 Dec 09 j 19:09 25°M10'33 -3051 Nov 15 j 07:08 0°M26'00 0°14'53 -3045 Dec 10 j 07:45 25° ML12'21 conjunction behind sun end -3051 Nov 15 j 07:08 0°14'50 max. Earth dist. -3045 Dec 11 j 04:30 25°ML15'24 20.83526 AU 0°M-26'00 minimum elong -3044 Mar 28 j 10:30 29°M14'56 -3051 Nov 15 j 04:20 0°M25'35 behind sun begin retrograde 0°M26'24 -3044 Jun 13 j 09:45 27°M-18'25 18.85726 AU -3051 Nov 15 j 09:55 min. Earth dist. behind sun end -3051 Nov 16 j 04:03 0°M29'07 20.49985 AU -3044 Jun 14 j 11:31 27°**M** 15'51 max. Earth dist. opposition 0°-7'-55 -3050 Mar 03 j 16:20 -3044 Aug 29 j 15:31 25°M19'01 4°M32'35 direct retrograde -3050 May 19 j 06:36 2°M35'06 18.53137 AU min. Earth dist. -3044 Dec 13 j 07:22 29°ML15'00 0°-8'-50 -3050 May 20 j 03:11 2°M33'01 opposition 0°14'36 conjunction 0°M34'18 -3044 Dec 13 j 07:21 29°ML15'00 -3050 Aug 04 j 20:21 0°08'56 direct minimum elong -3044 Dec 13 j 01:43 29°M14'12 behind sun begin -3044 Dec 13 j 13:00 29°M 15'48 conjunction -3050 Nov 19 j 15:09 4°M36'47 0°11'34 behind sun end minimum elong -3050 Nov 19 j 15:09 4°M36'47 0°11'30 max. Earth dist. -3044 Dec 14 j 09:45 29°M 18'50 20.87757 AU behind sun begin -3050 Nov 19 j 10:23 4°M36'05 -3044 Dec 26 j 05:50 0°**∡**7 behind sun end -3050 Nov 19 j 19:56 4°**ጤ**37'28 retrograde -3043 Apr 01 j 20:50 3°**х¹**18′06 max. Earth dist. -3050 Nov 20 j 12:40 4°M39'59 20.56249 AU -3043 Jun 18 j 22:48 1°**≯**19'00 0°-11'-35 opposition retrograde -3049 Mar 08 j 05:39 8°M42'45 min. Earth dist. -3043 Jun 17 j 20:33 1°**尽**21'38 18.89725 AU -3049 May 24 j 18:02 6°M43'17 0°10'53 -3043 Jul 25 j 03:10 30°RM opposition min. Earth dist. -3049 May 23 j 19:25 6°M45'33 18.59324 AU -3043 Sep 03 j 00:29 29°M22'20 direct -3049 Aug 09 j 09:02 4°ML44'55 -3043 Oct 11 i 13:31 direct 0°**∡**¹ -3049 Nov 23 j 22:49 8°M46'09 -3043 Dec 17 j 13:02 conjunction 0°08'12 conjunction 3°**х** 17'29 0°-12'-6 -3049 Nov 23 j 22:49 -3043 Dec 17 j 13:01 minimum elong 8°M46'09 0°08'09 minimum elong 3°**х** 17′29 0°12'13 behind sun begin -3049 Nov 23 i 16:59 8°ML45'19 behind sun begin -3043 Dec 17 i 08:34 3°**х** 16'51 behind sun end -3049 Nov 24 i 04:39 8°M47'00 behind sun end -3043 Dec 17 i 17:29 3°**∡**18′07 8°M49'40 20.62327 AU 3°**∡**21'31 20.91512 AU max. Earth dist. -3049 Nov 24 j 22:35 max. Earth dist. -3043 Dec 18 j 16:50 retrograde -3048 Mar 11 j 15:56 12° ML51'32 retrograde -3042 Apr 06 j 05:22 7°**∡**20'14 -3042 Jun 22 j 07:09 min. Earth dist. -3048 May 27 j 09:17 10°ML54'30 18.65289 AU min. Earth dist. 5°**∡**'23'43 18.93247 AU opposition -3048 May 28 j 08:25 10°M 52'11 0°07'07 opposition -3042 Jun 23 j 09:26 5°**∡**121'06 0°-15'-10 direct -3048 Aug 12 j 21:23 8°M54'12 direct -3042 Sep 07 j 09:21 3°**х¹**24'34 -3048 Nov 27 j 05:48 12°M 54'14 0°04'49 -3042 Dec 21 j 18:24 7° ₹ 18'56 0°-15'-18 conjunction conjunction -3048 Nov 27 j 05:48 12°M 54'14 0°04'44 -3042 Dec 21 j 18:24 7°**∡**18'56 0°15'24 minimum elong minimum elong -3048 Nov 26 j 23:24 12°M53'19 -3042 Dec 21 j 16:18 7°**∡**18'38 behind sun begin behind sun begin -3048 Nov 27 j 12:11 12°ML55'09 7°**∡**19'14 behind sun end behind sun end -3042 Dec 21 j 20:30 max. Earth dist. -3048 Nov 28 j 05:45 12°M 57'46 20.68164 AU max. Earth dist. -3042 Dec 22 j 21:26 7°**∡**'22'51 20.94820 AU -3047 Jan 03 j 12:08 15°M retrograde -3041 Apr 10 j 14:00 11°**尽**21'22 retrograde -3047 Mar 16 j 04:29 16°M 59'05 opposition -3041 Jun 27 j 19:16 9°**₹**22'10 0°-18'-39 opposition -3047 Jun 01 j 22:10 14°M 59'49 0°03'20 min. Earth dist. -3041 Jun 26 j 16:46 9°**∡**′24'49 18.96353 AU

direct

-3041 Sep 11 j 16:47

7°**х** 25′43

min. Earth dist.

-3047 May 31 j 21:31 15° ML02'17 18.70985 AU

-3047 Jun 01 j 20:20 15°RML

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3041 in astronomical counting style is the year 3042 BCE in historical counting style. -3041 Dec 25 i 23:39 11° ₹ 19'25 0°-18'-24 -3032 Jan 26 j 18:08 13°**⋜**07'06 0°-38'-44 conjunction conjunction minimum elong -3041 Dec 25 j 23:39 11°**₹**19'25 -3032 Jan 26 j 18:08 13°る07'06 0°38'50 minimum elong 0°18'31 max. Earth dist. -3041 Dec 27 j 04:04 11° ₹23'31 20.97715 AU max. Earth dist. -3032 Jan 27 j 20:40 13°る10'53 21.07492 AU -3040 Apr 13 j 22:10 15° ₹21'35 -3032 May 16 j 16:07 17°る09'14 retrograde retrograde -3040 Jun 30 j 01:58 13° ₹25'00 18.99060 AU -3032 Aug 02 j 17:43 15°**⋜**09'48 0°-43'-51 min. Earth dist. opposition -3032 Aug 01 j 18:14 15°る12'10 19.07195 AU -3040 Jul 01 j 04:38 13°**尽** 22'20 opposition 0°-22'-2 min. Earth dist. -3040 Sep 15 j 00:25 11°**尽**25'59 -3032 Oct 16 j 18:51 13°**⋜**13'46 direct direct -3040 Dec 29 j 04:29 15° ₹ 19'04 0°-21'-24 -3031 Jan 30 j 00:28 17°る05'39 0°-40'-33 conjunction conjunction -3040 Dec 29 j 04:29 15°**尽** 19'04 0°21'30 -3031 Jan 30 j 00:28 17°₹05'39 0°40'40 minimum elong minimum elong -3040 Dec 30 j 08:09 15° ₹23'04 21.00246 AU -3031 Jan 31 j 00:43 17°る09'06 21.06671 AU max. Earth dist. max. Earth dist. -3039 Apr 18 j 06:13 19° ₹21'03 -3031 May 21 j 01:02 21°**⋜**08'02 retrograde retrograde -3039 Jul 04 j 10:47 17° **₹**24'25 19.01425 AU -3031 Aug 06 j 02:41 19°る10'43 19.06093 AU min. Earth dist. min. Earth dist. opposition -3039 Jul 05 j 13:35 17°**尽**21'44 0°-25'-18 opposition -3031 Aug 07 j 00:31 19°**る**08'31 0°-45'-45 direct -3039 Sep 19 j 06:35 15° ₹25'27 direct -3031 Oct 20 j 22:38 17°る12'22 conjunction -3038 Jan 02 j 09:34 19° **₹** 18'04 0°-24'-18 conjunction -3030 Feb 03 j 07:29 21°る04'30 0°-42'-10 minimum elong -3038 Jan 02 j 09:34 19° **₹** 18'04 0°24'25 minimum elong -3030 Feb 03 j 07:29 21°る04'30 0°42'16 max. Earth dist. -3038 Jan 03 j 14:30 19° ₹22'13 21.02428 AU max. Earth dist. -3030 Feb 04 j 07:29 21°る07'55 21.05281 AU retrograde -3038 Apr 22 j 13:58 23° ₹ 19'52 retrograde -3030 May 25 j 09:42 25°る07'07 opposition -3038 Jul 09 j 21:52 21° ₹ 20'32 0°-28'-25 min. Earth dist. -3030 Aug 10 j 10:03 23°る09'37 19.04414 AU min. Earth dist. -3038 Jul 08 j 18:57 21° ₹23'14 19.03435 AU opposition -3030 Aug 11 i 06:56 23°**ろ**07'30 0°-47'-26 direct -3038 Sep 23 j 12:49 19° ₹24'20 direct -3030 Oct 25 j 04:36 21°**ට**11'12 conjunction -3037 Jan 06 j 14:30 23° ₹ 16'33 0°-27'-4 conjunction -3029 Feb 07 j 14:42 25°る03'40 0°-43'-36 -3037 Jan 06 j 14:30 23° ₹ 16'33 0°27'10 minimum elong -3029 Feb 07 i 14:42 25°**⋜**03'40 0°43'42 minimum elong max. Earth dist. -3037 Jan 07 j 18:21 23° ₹20'33 21.04270 AU max. Earth dist. -3029 Feb 08 j 12:06 25°る06'43 21.03340 AU retrograde -3037 Apr 26 j 22:21 27° ₹ 18'17 retrograde -3029 May 29 j 18:43 29°る06'34 -3037 Jul 13 j 03:13 25° ₹21'35 19.05105 AU opposition -3029 Aug 15 j 13:27 27°る06'49 0°-48'-53 min. Earth dist. -3037 Jul 14 j 05:53 25° ₹ 18'55 0°-31'-25 -3029 Aug 14 j 18:26 27°る08'44 19.02212 AU min. Earth dist. opposition -3037 Sep 27 j 18:04 23° ₹ 22'47 -3029 Oct 29 j 08:58 25°る10'19 direct direct -3036 Jan 10 j 19:33 27° **₹** 14'43 0°-29'-42 -3028 Feb 11 j 22:15 29°る03'10 0°-44'-48 conjunction conjunction -3036 Jan 10 j 19:33 27° **₹** 14'43 0°29'49 -3028 Feb 11 j 22:15 29°₹03'10 0°44'54 minimum elong minimum elong -3036 Jan 12 j 00:27 27° ₹ 18'51 21.05748 AU -3028 Feb 12 j 19:27 29°る06'11 21.00890 AU max. Earth dist. max. Earth dist. -3036 Mar 03 j 17:23 0°る -3028 Feb 28 j 16:16 0°≈ -3036 Apr 30 j 05:56 1°**る**16'25 -3028 Jun 02 j 03:28 retrograde retrograde 3°≈06'24 -3036 Jun 29 j 06:47 30°R.✓ opposition -3028 Aug 18 j 19:49 1°≈06'30 0°-50'-6 -3036 Jul 16 j 10:53 29°**尽** 19'43 19.06392 AU min. Earth dist. min. Earth dist. -3028 Aug 18 j 01:34 1°≈08'21 18.99524 AU opposition -3036 Jul 17 j 13:31 29° **₹** 17'03 0°-34'-15 -3028 Sep 16 j 18:08 30°R♂ direct -3036 Sep 30 j 23:27 27°**尽** 20'59 direct -3028 Nov 01 j 14:34 29°**⋜**09'48 -3036 Dec 23 j 12:44 0°₹ -3028 Dec 16 j 04:52 -3035 Jan 14 j 00:41 1°る12'43 0°-32'-12 conjunction -3027 Feb 15 j 06:13 3°≈03'08 0°-45'-47 conjunction -3035 Jan 14 j 00:41 1°る12'43 0°32'19 -3027 Feb 15 j 06:13 3°≈03'08 0°45'53 minimum elong minimum elong -3035 Jan 15 i 04:15 -3027 Feb 16 i 00:55 3°≈05'48 20.97998 AU max. Earth dist. 1°る16'39 21.06853 AU max. Earth dist. -3035 May 04 j 14:40 -3027 Jun 06 j 12:53 retrograde 5°る14'28 retrograde 7°≈06'45 -3035 Jul 21 i 20:56 3°**ප**15'05 0°-36'-55 opposition min. Earth dist. -3027 Aug 22 i 09:48 5°≈08'21 18.96436 AU -3035 Jul 20 i 19:00 min. Earth dist. 3°る17'41 19.07300 AU opposition -3027 Aug 23 i 02:10 5°≈06'41 0°-51'-5 -3035 Oct 05 j 03:56 direct 1°る19'03 direct -3027 Nov 05 j 19:20 3°≈09'43 -3034 Jan 18 j 06:13 5°**ප**10'42 0°-34'-33 -3026 Feb 19 i 14:52 7°≈03'40 0°-46'-33 conjunction conjunction -3034 Jan 18 j 06:12 5°る10'42 0°34'39 minimum elong -3026 Feb 19 j 14:52 7°≈03'40 0°46'40 minimum elong -3026 Feb 20 j 09:18 -3034 Jan 19 j 10:26 max. Earth dist. 5°る14'44 21.07542 AU max. Earth dist. 7°≈06'18 20.94719 AU -3034 May 08 j 22:48 retrograde 9°る12'32 retrograde -3026 Jun 10 j 22:16 11°≈07'43 -3034 Jul 25 j 02:33 min. Earth dist. 7°る15'43 19.07760 AU opposition -3026 Aug 27 j 08:29 9°≈07'30 0°-51'-49 -3034 Jul 26 j 04:03 9°**≈**09'06 18.92975 AU opposition 7°る13'09 0°-39'-25 min. Earth dist. -3026 Aug 26 j 16:51 direct -3034 Oct 09 j 09:21 5°る17'09 direct -3026 Nov 10 j 00:43 7°≈10'19 -3033 Jan 22 j 11:56 9°る08'48 0°-36'-43 -3025 Feb 23 j 23:49 11°≈04'56 0°-47'-6 conjunction conjunction -3033 Jan 22 j 11:56 9°る08'47 0°36'51 -3025 Feb 23 j 23:49 11°≈04'56 0°47'11 minimum elong minimum elong max. Earth dist. -3033 Jan 23 j 14:19 9°る12'33 21.07771 AU max. Earth dist. -3025 Feb 24 j 15:39 11°≈07'11 20.91097 AU retrograde -3033 May 13 j 07:30 13°る10'46 -3025 May 26 j 15:45 15°**≈** min. Earth dist. -3033 Jul 29 j 10:43 11°る13'48 19.07746 AU retrograde -3025 Jun 15 j 08:08 15°**≈**09′28 opposition -3033 Jul 30 j 10:55 11°る11'22 0°-41'-44 -3025 Jul 05 j 02:24 15°R≈ -3033 Oct 13 j 13:03 9°**る**15'21 -3025 Aug 31 j 14:56 13°≈09'07 0°-52'-17 direct opposition

min. Earth dist.

-3025 Aug 31 j 01:14 13°≈10'32 18.89202 AU

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 26

,	nical year style is used: The			//		/ 1	age 20
direct	-3025 Nov 14 j 05:40	•	in astronomical cot	min. Earth dist.	-3017 Oct 03 j 06:03		
direct	-3024 Feb 26 j 07:55			direct	-3017 Dec 16 j 16:37		10.40754 AC
	-3024 FC0 20 j 07.33	13 \infty		direct	-3017 Dec 10 j 10.37	14 /(0) 10	
conjunction	-3024 Feb 28 i 09:31	15°207'06	0°-47'-25	conjunction	-3016 Apr 02 j 18:28	18° ₩ 13'51	0°-41'-18
minimum elong	-3024 Feb 28 j 09:31	15°≈07'06	0°47'30	minimum elong	-3016 Apr 02 j 18:28		0°41'21
max. Earth dist.	-3024 Feb 29 j 01:03		20.87178 AU	max. Earth dist.	-3016 Apr 02 j 17:14		
retrograde	-3024 Jun 18 j 18:45		20.8/1/8 AU	retrograde	-3016 Jul 22 j 22:03		20.43337 AU
opposition	-3024 Sep 03 j 21:31		0°-52'-31	opposition	-3016 Oct 06 j 15:06		0°-44'-46
min. Earth dist.	-3024 Sep 03 j 21.31			min. Earth dist.	-3016 Oct 06 j 16:48		
	-3024 Sep 03 J 08.29 -3024 Nov 17 j 11:39		18.83137 AU				18.42309 AU
direct	-3024 NOV 17 J 11:39	15***14*03		direct	-3016 Dec 20 j 04:19	18° π 23′20	
conjunction	-3023 Mar 03 j 19:39	19° ≈ 10'19	0°-47'-30	conjunction	-3015 Apr 07 j 11:16	22°¥20'14	0°-39'-27
minimum elong	-3023 Mar 03 j 19:39	19°≈10'19	0°47'34	minimum elong	-3015 Apr 07 j 11:16		0°39'29
max. Earth dist.	-3023 Mar 04 j 08:29		20.82988 AU	max. Earth dist.	-3015 Apr 07 j 06:42		
retrograde	-3023 Jun 23 j 05:06		20.02700 AC	retrograde	-3015 Jul 27 j 11:15		20.37021 AC
opposition	-3023 Sep 08 j 04:28	23 ≈1001 21°≈15'28	0°-52'-29	opposition	-3015 Oct 11 j 01:27		0°-42'-36
min. Earth dist.	-3023 Sep 08 j 04:28			min. Earth dist.	-3015 Oct 11 j 06:03		
	-3023 Sep 07 j 17:33		16.60613 AU	direct	-3015 Dec 24 j 14:39		16.33079 AU
direct	-3023 NOV 21 J 10.44	19 ≈1/33		direct	-3013 Dec 24 j 14.39	22 X 38 31	
conjunction	-3022 Mar 08 j 06:49	23° ≈ 14'48	0°-47'-20	conjunction	-3014 Apr 12 j 05:03	26°¥46'11	0°-37'-22
minimum elong	-3022 Mar 08 j 06:49	23°≈14'48	0°47'25	minimum elong	-3014 Apr 12 j 05:03	26°\(\frac{4}{4}6'11\)	0°37'23
max. Earth dist.	-3022 Mar 08 j 19:05		20.78532 AU	max. Earth dist.	-3014 Apr 11 j 23:02		
	,		20.78332 AU	max. Earth dist.	-3014 Apr 11 j 23:02	20 π 43 18	20.32319 AU
retrograde	-3022 Jun 27 j 17:22		09 521 12		,	0° Υ 58'28	
opposition	-3022 Sep 12 j 11:26			retrograde	-3014 Aug 01 j 03:07		
min. Earth dist.	-3022 Sep 12 j 01:29		18.76215 AU	••	-3014 Sep 19 j 11:33	30° ₹	00 401 11
direct	-3022 Nov 25 j 23:59	23°≈22'23		opposition	-3014 Oct 15 j 12:04		0°-40'-11
	2021.16 12:10.22	250 20111	00.461.55	min. Earth dist.	-3014 Oct 15 j 17:36		18.28913 AU
conjunction	-3021 Mar 12 j 18:33	27°≈20'41	0°-46'-57	direct	-3014 Dec 29 j 03:30		
minimum elong	-3021 Mar 12 j 18:33	27° ≈ 20'41	0°47'01		-3013 Mar 29 j 11:05	$\mathbf{\gamma}_{0}$	
max. Earth dist.	-3021 Mar 13 j 03:51		20.73808 AU			••	
	-3021 May 01 j 19:25	0° \		conjunction	-3013 Apr 16 j 23:27	1° Y 04'43	0°-35'-3
retrograde	-3021 Jul 02 j 04:01	1° ¥ 27'43		minimum elong	-3013 Apr 16 j 23:27	1° Y 04'43	0°35'04
	-3021 Sep 03 j 09:25	30° R ≈		max. Earth dist.	-3013 Apr 16 j 14:33		20.25516 AU
opposition	-3021 Sep 16 j 19:02	29° ≈ 27'01		retrograde	-3013 Aug 05 j 17:35	5° Y 17'47	
min. Earth dist.	-3021 Sep 16 j 11:31		18.71354 AU	opposition	-3013 Oct 19 j 23:31	3° Y 16′02	
direct	-3021 Nov 30 j 05:35			min. Earth dist.	-3013 Oct 20 j 07:44		18.22101 AU
	-3020 Feb 19 j 06:35	0°)		direct	-3012 Jan 02 j 15:05	1° Ƴ 14'38	
						••	
conjunction	-3020 Mar 16 j 07:07	1° ¥ 28′05		conjunction	-3012 Apr 20 j 18:36	5° Y 24'54	0°-32'-32
minimum elong	-3020 Mar 16 j 07:07	1° ¥ 28′05	0°46'22	minimum elong	-3012 Apr 20 j 18:36	5° Y 24'54	0°32'33
max. Earth dist.	-3020 Mar 16 j 15:37		20.68804 AU	max. Earth dist.	-3012 Apr 20 j 08:23		20.18707 AU
retrograde	-3020 Jul 05 j 17:34	5° ¥ 35'51		retrograde	-3012 Aug 09 j 10:57	9° Ƴ 38'45	
opposition	-3020 Sep 20 j 02:54	3° ¥ 35′05	0°-50'-48	opposition	-3012 Oct 23 j 11:26	7° Ƴ 36'50	0°-34'-37
min. Earth dist.	-3020 Sep 19 j 20:29		18.66190 AU	min. Earth dist.	-3012 Oct 23 j 20:18		18.15303 AU
direct	-3020 Dec 03 j 14:25	1° ∺ 36′28		direct	-3011 Jan 06 j 05:24	5° Ƴ 35'01	
						••	
conjunction	-3019 Mar 20 j 20:37	5°) ₹37'06	0°-45'-26	conjunction	-3011 Apr 25 j 14:41	9° Y 46'48	0°-29'-49
minimum elong	-3019 Mar 20 j 20:37	5° ∺ 37'06		minimum elong	-3011 Apr 25 j 14:41	9° Ƴ 46'48	0°29'49
max. Earth dist.	-3019 Mar 21 j 01:47		20.63487 AU	max. Earth dist.	-3011 Apr 25 j 02:00	9° Ƴ 44'56	20.11935 AU
retrograde	-3019 Jul 10 j 04:52	9°) 45′37		retrograde	-3011 Aug 14 j 02:33	14° Ƴ 01'25	
opposition	-3019 Sep 24 j 11:15		0°-49'-42	opposition	-3011 Oct 28 j 00:04	11° Y 59'25	0°-31'-30
min. Earth dist.	-3019 Sep 24 j 07:43		18.60711 AU	min. Earth dist.	-3011 Oct 28 j 11:30	11° Y 58'11	18.08586 AU
direct	-3019 Dec 07 j 21:25	5°) 45′51		direct	-3010 Jan 10 j 18:12	9° Ƴ 57'10	
		>-					
conjunction	-3018 Mar 25 j 11:13	9°) 47'45		conjunction	-3010 Apr 30 j 11:38		0°-26'-55
minimum elong	-3018 Mar 25 j 11:13	9°) 47'45	0°44'20	minimum elong	-3010 Apr 30 j 11:38		0°26'54
max. Earth dist.	-3018 Mar 25 j 14:59		20.57838 AU	max. Earth dist.		14° Y 08′24	20.05282 AU
retrograde	-3018 Jul 14 j 19:06	13° ¥ 57′01		retrograde	-3010 Aug 18 j 21:35	18° Y 25′56	
opposition	-3018 Sep 28 j 20:02	11° ¥ 56′04		opposition	-3010 Nov 01 j 13:22		0°-28'-11
min. Earth dist.	-3018 Sep 28 j 17:43		18.54884 AU	min. Earth dist.	-3010 Nov 02 j 01:18		18.02001 AU
direct	-3018 Dec 12 j 07:54	9° ⊁ 56'49		direct	-3009 Jan 15 j 10:06	14° Y 21′13	
conjunction	-3017 Mar 30 j 02:20	14° ∺ 00'01	0°-42'-55	conjunction	-3009 May 05 j 09:11	18° Ƴ 36′07	0°-23'-50
minimum elong	-3017 Mar 30 j 02:20		0°42'58	minimum elong	-3009 May 05 j 09:11	18° Ƴ 36′07	0°23'49
max. Earth dist.	-3017 Mar 30 j 02:35		20.51844 AU	max. Earth dist.	• •		19.98771 AU
retrograde	-3017 Jul 19 j 07:10			retrograde	-3009 Aug 23 j 14:37	22° Y 52′21	
opposition	-3017 Oct 03 j 05:27	16° 米 08′57	0°-46'-41	opposition	-3009 Nov 06 j 03:34	20° Y 50′12	0°-24'-41

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -3009 in astronomical counting style is the year 3010 BCE in historical counting style. -3009 Nov 06 j 17:52 20° \cdot 48'39 17.95584 AU min. Earth dist. conjunction -3008 Jan 20 j 00:28 18°**Y**47'14 minimum elong direct -3002 Jun 07 j 07:41 20°**8**29'32 behind sun begin -3002 Jun 07 j 21:15 20°**8**31'33 -3008 May 09 j 07:41 23°**Υ**'03'44 0°-20'-35 behind sun end conjunction -3002 Sep 24 j 16:04 24°**8**51'33 -3008 May 09 j 07:41 23°**Υ**03'44 0°20'33 minimum elong retrograde -3002 Dec 07 j 04:31 22°**8**49'15 0°03'42 -3008 May 08 j 13:50 23°Υ01'04 19.92454 AU max. Earth dist. opposition -3008 Aug 27 j 10:59 27°**Y**20'45 -3002 Dec 08 j 04:02 22°846'41 17.55526 AU retrograde min. Earth dist. -3008 Nov 09 j 18:14 25°**Υ**18'35 -3001 Feb 20 j 16:09 20°**8**44'05 opposition 0°-20'-59 direct -3008 Nov 10 j 09:09 25°**Υ**16'58 min. Earth dist. 17.89356 AU direct -3007 Jan 23 j 17:42 23°**Y**15'18 conjunction -3001 Jun 12 j 17:21 25°**8**10'44 0°05'19 -3001 Jun 12 j 17:21 25°**8**10'44 max. Earth dist. -3007 May 13 j 11:41 27°**Υ**30'30 19.86305 AU minimum elong 0°05'24 -3001 Jun 12 j 10:49 25°**8**09'45 behind sun begin -3007 May 14 j 07:08 27°**Y**33'25 0°-17'-11 -3001 Jun 12 j 23:53 25°**8**11'43 conjunction behind sun end minimum elong -3007 May 14 j 07:08 27°**Y**33'25 0°17'10 max. Earth dist. -3001 Jun 11 j 13:05 25°**8**06'23 19.53047 AU -3007 Jun 26 j 05:02 0° 8 retrograde -3001 Sep 29 j 14:02 29°**8**32'12 retrograde -3007 Sep 01 j 05:56 1°**8**51'12 opposition -3001 Dec 12 j 00:52 27°**8**29'51 0°07'58 -3007 Nov 10 j 04:45 30°R**Y** min. Earth dist. -3001 Dec 13 j 01:30 27°**8**27'10 17.50705 AU opposition -3007 Nov 14 j 10:00 29°**Υ**49'03 0°-17'-8 direct -3000 Feb 25 j 15:56 25°**8**24'22 min. Earth dist. -3007 Nov 15 j 03:22 29°**Υ**47'10 17.83296 AU direct -3006 Jan 28 j 10:03 27°**Y**45′28 conjunction -3000 Jun 16 j 20:32 29°852'09 0°09'08 -3006 Apr 13 j 09:32 0°8 minimum elong -3000 Jun 16 j 20:32 29°852'09 0°09'13 max. Earth dist. -3006 May 18 j 09:37 2°801'53 19.80328 AU behind sun begin -3000 Jun 16 j 14:51 29°851'17 behind sun end -3000 Jun 17 j 02:13 29°853'00 conjunction -3006 May 19 i 07:15 2°805'09 0°-13'-39 max. Earth dist. -3000 Jun 15 j 14:18 29°847'28 19.48417 AU -3006 May 19 i 07:15 2°**8**05'09 0°13'36 -3000 Jun 18 j 23:20 Π °0 minimum elong -3006 May 19 j 03:43 2°804'38 -3000 Oct 03 j 11:51 4°**Ⅱ**14'00 behind sun begin retrograde -3006 May 19 j 10:46 2°805'40 -3000 Dec 15 j 21:43 2°**I**11'36 0°12'13 behind sun end opposition -3006 Sep 06 j 03:19 6°823'41 -3000 Dec 16 j 22:56 2°П08'51 17.46290 AU retrograde min. Earth dist. -3006 Nov 19 j 02:25 4°**8**21'32 0°-13'-8 -2999 Mar 01 j 16:17 0°**I**105'49 opposition direct max. Earth dist. -3006 Nov 19 j 20:30 4°**8**19'34 17.77398 AU -2999 Jun 20 j 18:35 4°**Д**30'03 19.44214 AU min. Earth dist. -3005 Feb 02 j 04:55 2°**8**17'39 direct -3005 May 23 j 09:23 -2999 Jun 22 j 00:08 4°II34'38 0°12'53 max. Earth dist. 6°**8**35'25 19.74492 AU conjunction -2999 Jun 22 j 00:08 4°**Д**34'38 0°12'58 minimum elong -2999 Jun 21 j 20:08 -3005 May 24 j 08:12 6°**8**38'52 0°-10'00 4°**∏**34'02 conjunction behind sun begin -3005 May 24 j 08:12 6°838'52 0°09'58 -2999 Jun 22 j 04:08 4°**Ⅲ**35'14 minimum elong behind sun end -3005 May 24 j 02:46 6°**8**38'04 -2999 Oct 08 j 10:48 8°**Ⅱ**56'49 behind sun begin retrograde -3005 May 24 j 13:39 6°**8**39'41 -2999 Dec 20 j 19:25 6°**II**54'23 0°16'23 behind sun end opposition retrograde -3005 Sep 10 j 23:35 10°858'07 min. Earth dist. -2999 Dec 21 j 20:57 6°**Д**51'36 17.42326 AU opposition -3005 Nov 23 j 19:51 8°**8**55'57 0°-9'-1 direct -2998 Mar 06 j 17:33 4°**Ⅱ**48'20 min. Earth dist. -3005 Nov 24 j 16:09 8°**8**53'44 17.71647 AU max. Earth dist. -2998 Jun 25 j 20:47 9°**I**13'16 19.40506 AU direct -3004 Feb 06 j 23:25 6°**8**51'45 max. Earth dist. -3004 May 27 j 08:20 11°8 10'35 19.68822 AU -2998 Jun 27 j 03:34 9°II18'03 0°16'35 conjunction -2998 Jun 27 j 03:34 9°**Ⅱ**18′03 0°16'41 minimum elong -3004 May 28 j 09:39 11°**8**14'27 0°-6'-17 -2998 Oct 13 j 09:37 13°**Ц**40'31 conjunction retrograde -3004 May 28 j 09:38 11°**8**14'27 -2998 Dec 25 j 17:45 11°**Ц**38'04 0°20'27 minimum elong opposition -3004 May 28 j 03:14 11°**8**13'29 -2998 Dec 26 j 19:35 11°**Д**35'15 17.38905 AU behind sun begin min. Earth dist. -3004 May 28 j 16:03 11°**8**15'24 behind sun end direct -2997 Mar 11 i 18:37 9°**Ⅱ**31'46 -3004 Aug 10 i 03:45 15°₩ -2997 Jul 01 j 01:37 13°**I**57'41 19.37369 AU max. Earth dist. -3004 Sep 14 j 21:25 15° \(\dag{2} 34'21 \) retrograde -3004 Oct 21 j 00:05 15°R\footnote{8} -2997 Jul 02 i 07:17 14° **I**I 02'19 0°20'10 conjunction -3004 Nov 27 i 13:57 13°\(232'08\) 0°-4'-50 -2997 Jul 02 i 07:17 14°**Ⅱ**02'19 0°20'15 opposition minimum elong min. Earth dist. -3004 Nov 28 j 11:01 13°**8**29'51 17.66061 AU retrograde -2997 Oct 18 j 09:40 18° **II**24'59 direct -3003 Feb 10 j 20:11 11°**8**27'37 -2997 Dec 30 j 16:35 16° **II** 22'33 0°24'24 opposition -2997 Dec 31 j 17:54 16° **I**I 19'47 17.36065 AU -3003 May 19 j 07:54 15°**8** min. Earth dist. -3003 Jun 01 j 09:54 15°847'45 19.63314 AU max. Earth dist. direct -2996 Mar 15 j 20:28 14°**I**16'06 max. Earth dist. -2996 Jul 05 j 04:45 18°**Ц**42'36 19.34836 AU conjunction -3003 Jun 02 j 11:55 15°**8**51'44 0°-2'-29 -3003 Jun 02 j 11:55 15°**8**51'44 0°02'25 -2996 Jul 06 j 10:57 18°**Ⅲ**47'20 0°23'38 minimum elong conjunction -2996 Jul 06 j 10:57 18° $\Pi 47'20$ -3003 Jun 02 j 05:08 15°**8**50'43 behind sun begin minimum elong 0°23'44 -3003 Jun 02 j 18:42 15°**8**52'44 -2996 Oct 22 j 09:26 23°**Ⅱ**10'10 behind sun end retrograde -3003 Sep 19 j 18:31 20°812'12 -2995 Jan 03 j 16:07 21°**Ⅱ**07'47 retrograde opposition 0°28'11 -3003 Dec 02 j 08:52 18°809'58 0°00'-34 opposition min. Earth dist. -2995 Jan 04 j 17:43 21°**I**I04'59 17.33855 AU -3003 Dec 03 j 07:45 18°807'28 17.60659 AU min. Earth dist. direct -2995 Mar 20 j 21:46 19°**Ⅱ**01'13 asc. node -3002 Jan 21 j 22:14 16°**8**21'18 max. Earth dist. -2995 Jul 10 j 09:39 23°**Ⅱ**28'29 19.32938 AU direct -3002 Feb 15 j 17:31 16°**8**05'07 max. Earth dist. -3002 Jun 06 j 10:04 20°\\$26'11 19.58038 AU -2995 Jul 11 j 14:42 23°**Ⅲ**33'02 0°26'57 conjunction

-2995 Jul 11 j 14:42 23°**Ⅲ**33'02 0°27'03

minimum elong

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -2995 in astronomical counting style is the year 2996 BCE in historical counting style. retrograde -2995 Oct 27 i 10:19 27°**Д**55'57 conjunction -2987 Aug 19 i 10:45 1°Ω45'33 0°45'15 -2994 Jan 08 j 16:09 25°**I**I53'41 0°31'48 -2987 Aug 19 j 10:45 1°**Ω**45'33 0°45'20 opposition minimum elong min. Earth dist. -2994 Jan 09 j 16:39 25°**I**I51'01 17.32258 AU -2987 Aug 18 j 13:18 1°**Ω**42'10 19.37169 AU max. Earth dist. -2994 Mar 26 j 00:49 23°**Ⅱ**47'05 -2987 Dec 04 j 09:20 6°**Ω**06'43 direct retrograde -2986 Feb 16 j 06:28 4°Ω05'15 0°51'02 opposition -2986 Feb 17 j 00:08 -2994 Jul 16 j 18:20 28° **1**19'22 0°30'05 conjunction min. Earth dist. 4°**Ω**03'21 17.38482 AU -2994 Jul 16 j 18:20 28° **1**19'22 0°30'11 -2986 May 04 j 09:45 minimum elong direct 1°**Ω**59'21 max. Earth dist. -2994 Jul 15 j 13:35 28°**Ⅱ**14'50 19.31648 AU 6°\$\O29'46 0°46'14 -2994 Aug 13 j 00:53 0ಂತಾ conjunction -2986 Aug 24 j 10:47 -2986 Aug 24 j 10:47 6°**Ω**29'46 0°46'20 retrograde -2994 Nov 01 j 10:03 2°9542'20 minimum elong opposition -2993 Jan 13 j 16:51 0°9540'10 0°35'11 max. Earth dist. -2986 Aug 23 j 16:20 6°**Ω**26'51 19.39849 AU -2993 Jan 14 j 17:42 0°937'28 17.31277 AU -2986 Dec 09 j 07:13 min. Earth dist. retrograde 10°**Ω**50′22 -2985 Feb 21 j 08:44 -2993 Jan 29 j 07:53 30°Ŗ**Ⅱ** opposition 8°**Ω**48'58 0°51'58 direct -2993 Mar 31 j 02:29 28°**Ⅲ**33'35 min. Earth dist. -2985 Feb 22 j 01:24 8°**Ω**47'11 17.41406 AU -2993 May 28 j 18:11 0ಂತಾ direct -2985 May 09 j 13:07 6°**Ω**43'15 conjunction -2993 Jul 21 j 21:41 3°506'10 0°33'02 conjunction -2985 Aug 29 j 09:46 11°**Ω**12'45 0°46'55 minimum elong -2993 Jul 21 j 21:41 3°506'10 0°33'08 minimum elong -2985 Aug 29 j 09:46 11°**Ω**12'44 0°46'59 max. Earth dist. -2993 Jul 20 j 17:53 3°901'47 19.30956 AU max. Earth dist. -2985 Aug 28 j 16:15 11° Ω 09'59 19.43035 AU retrograde -2993 Nov 06 j 11:25 7°9529'06 -2985 Nov 09 j 20:41 15°**Ω** opposition -2992 Jan 18 j 17:54 5°527'04 0°38'21 retrograde -2985 Dec 14 j 05:58 $15^{\circ}\Omega$ 32'46 min. Earth dist. -2992 Jan 19 i 17:19 5°524'31 17.30850 AU -2984 Jan 18 i 15:55 15°RΩ direct -2992 Apr 04 i 07:03 3°9520'32 opposition -2984 Feb 26 i 10:44 13°Ω31'25 0°52'32 max. Earth dist. -2992 Jul 24 j 22:07 7°549'02 19.30788 AU min. Earth dist. -2984 Feb 27 i 01:01 13° Ω 29'53 17.44851 AU direct -2984 May 13 j 16:05 $11^{\circ}\Omega$ 25'53 -2992 Jul 26 j 01:02 7°953'17 0°35'45 -2984 Aug 18 j 20:41 15°**Ω** conjunction -2992 Jul 26 j 01:02 7°953'17 minimum elong 0°35'50 -2992 Nov 10 j 10:40 12°516'06 -2984 Sep 02 j 08:06 15°Ω54'24 0°47'16 retrograde conjunction -2991 Jan 22 j 19:26 10°5514'12 0°41'15 -2984 Sep 02 j 08:06 15° **Ω**54'24 0°47'20 opposition minimum elong -2984 Sep 01 j 17:54 15° **Ω**52'09 19.46741 AU -2991 Jan 23 j 19:17 10°5511'37 17.30946 AU min. Earth dist. max. Earth dist. -2984 Dec 18 j 03:58 $20^{\circ}\Omega$ 13'45 -2991 Apr 09 j 09:40 8°507'44 direct retrograde -2991 Jul 30 j 01:38 12°536'19 19.31135 AU -2983 Mar 02 j 12:33 $18^{\circ}\Omega$ 12'30 $0^{\circ}52'45$ max. Earth dist. opposition -2983 Mar 03 j 01:04 18° **Ω**11'10 17.48814 AU min. Earth dist. -2983 May 18 j 19:02 16°**Ω**07'14 -2991 Jul 31 j 04:01 12°540'29 conjunction 0°38'13 direct -2991 Jul 31 j 04:00 12°540'29 minimum elong 0°38'18 -2983 Sep $07 \text{ j } 05:27 \quad 20^{\circ} \Omega 34'38 \quad 0^{\circ} 47'19$ -2991 Nov 15 j 11:53 17°503'08 retrograde conjunction -2990 Jan 27 j 21:20 15°501'20 0°43'51 -2983 Sep 07 j 05:27 $20^{\circ}\Omega$ 34'38 $0^{\circ}47'23$ opposition minimum elong min. Earth dist. -2990 Jan 28 j 19:24 14°558'57 17.31528 AU max. Earth dist. -2983 Sep 06 j 16:36 20° **Q**32'36 19.50981 AU direct -2990 Apr 14 j 15:17 12°554'58 retrograde -2983 Dec 23 j 01:37 24° **Ω**53'21 max. Earth dist. -2990 Aug 04 j 05:50 17°523'38 19.31949 AU opposition -2982 Mar 07 j 14:09 22°**Ω**52'11 0°52'37 min. Earth dist. -2982 Mar 08 j 00:17 22°**Ω**51'07 17.53323 AU -2990 Aug 05 j 06:31 17°\$27'32 0°40'25 -2982 May 23 j 20:00 20°**Ω**47'14 conjunction direct -2990 Aug 05 j 06:31 17°527'32 minimum elong -2990 Nov 20 j 10:47 21°549'56 -2982 Sep 12 j 01:59 25° Ω 13'26 0°47'04 retrograde conjunction -2989 Feb 01 j 23:37 19°548'15 0°46'09 -2982 Sep 12 j 01:59 25° Ω 13'26 0°47'06 opposition minimum elong -2989 Feb 02 j 21:47 19°545'51 17.32578 AU -2982 Sep 11 j 16:33 25° Ω11'57 19.55749 AU min. Earth dist. max. Earth dist. -2982 Dec 27 j 23:35 $29^{\circ}\Omega$ 31'27 direct -2989 Apr 19 i 18:41 17°5541'58 retrograde max. Earth dist. -2989 Aug 09 i 08:14 22°\$\sigma10'23 19.33234 AU opposition -2981 Mar 12 j 15:23 $27^{\circ}\Omega 30'26$ $0^{\circ}52'08$ min. Earth dist. -2981 Mar 12 j 23:13 $27^{\circ}\Omega$ 29'37 17.58318 AU -2989 Aug 10 i 08:31 22°514'14 0°42'20 direct -2981 May 28 j 22:47 $25^{\circ}\Omega 25'52$ conjunction -2989 Aug 10 j 08:31 22°514'14 minimum elong 0°42'24 -2989 Nov 25 j 11:21 26°536'16 -2981 Sep 16 j 21:41 29° Ω 50'48 0°46'30 retrograde conjunction -2988 Feb 07 j 01:42 24°534'40 0°48'08 -2981 Sep 16 j 21:41 29° Ω 50'48 0°46'33 opposition minimum elong -2981 Sep 16 j 13:48 29° **Q**49'34 19.60980 AU min. Earth dist. -2988 Feb 07 j 21:53 24°532'30 17.34087 AU max. Earth dist. -2988 Apr 24 j 00:45 22°528'30 direct -2981 Sep 19 j 08:26 0° m 4°№08'06 retrograde -2980 Jan 01 j 19:30 -2980 Mar 16 j 16:07 conjunction -2988 Aug 14 j 10:07 27°500'18 0°43'57 opposition 2° m 07'15 0°51'20 -2988 Aug 14 j 10:07 27°500'18 0°44'02 min. Earth dist. -2980 Mar 16 j 22:03 2° Mp 06'37 17.63763 AU minimum elong -2988 Aug 13 j 12:06 26°556'50 19.34968 AU direct -2980 Jun 01 j 22:45 0° Mp 03'04max. Earth dist. -2988 Oct 05 j 07:03 0 $^{\circ}\Omega$ -2988 Nov 29 j 09:31 -2980 Sep 20 j 16:41 4° **m** 26'40 $0^{\circ}45'39$ retrograde 1°**£**21′56 conjunction -2987 Jan 26 j 12:52 30° Rூ minimum elong -2980 Sep 20 j 16:41 4° Mp 26'40 0°45'41 opposition -2987 Feb 11 j 04:10 29°520'25 0°49'45 max. Earth dist. -2980 Sep 20 j 11:50 4° ከ 25'55 19.66622 AU min. Earth dist. -2987 Feb 12 j 00:03 29°518'17 17.36046 AU retrograde -2979 Jan 05 j 16:30 8° Mp 43'14 direct -2987 Apr 29 j 04:31 27°514'23 opposition -2979 Mar 21 j 16:38 6° Mp 42'33 $0^{\circ}50'12$ -2987 Jul 21 j 21:02 0°**Ω** min. Earth dist. -2979 Mar 21 j 20:00 6° Mp 42'12 17.69562 AU -2979 Jun 07 j 01:07 4°m/38'49 direct

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -2979 in astronomical counting style is the year 2980 BCE in historical counting style. 9° m 01'00 0°44'30 -2979 Sep 25 i 10:38 conjunction -2971 Oct 30 i 04:49 14° \(\Omega\) 30'08 0°26'52 conjunction minimum elong -2979 Sep 25 j 10:38 9° m 01'00 0°44'32 -2971 Oct 30 j 04:49 14° **△**30'08 0°26'51 minimum elong 9°**m**00'31 19.72577 AU -2979 Sep 25 j 07:34 -2971 Oct 30 j 18:12 14° \(\Omega\) 32'10 20.24389 AU max. Earth dist. max. Earth dist. -2970 Feb 14 j 22:26 18°**♀**39'27 -2978 Jan 10 j 11:01 13° Mp 16'50 retrograde retrograde -2978 Mar 26 j 16:49 11° **m** 16'17 -2970 May 02 j 19:02 16°**♀**39'34 opposition 0°48'46 opposition 0°28'08 -2970 May 02 j 05:33 16°**£**40'57 18.27679 AU min. Earth dist. -2978 Mar 26 j 18:38 11° m 16'06 17.75659 AU min. Earth dist. -2978 Jun 12 j 00:02 -2970 Jul 18 j 19:34 14°**2**39'18 direct 9° m 12'59 direct -2970 Nov 03 j 15:19 18°**♀**47'24 conjunction -2978 Sep 30 j 03:57 13° m 33'42 0°43'05 conjunction 0°23'53 -2970 Nov 03 j 15:19 18°**△**47'24 minimum elong -2978 Sep 30 j 03:57 13° Mp 33'42 0°43'07 minimum elong 0°23'50 max. Earth dist. -2978 Sep 30 j 03:27 13° Mp 33'37 19.78793 AU max. Earth dist. -2970 Nov 04 j 06:07 18°**△**49'37 20.30986 AU -2977 Jan 15 j 06:32 17° Mp 48'44 -2969 Feb 19 j 13:25 22°**♀**55'55 retrograde retrograde -2977 Mar 31 j 16:14 15° m/48'21 -2969 May 07 j 12:40 20°**♀**56'07 opposition 0°47'02 opposition 0°24'45 min. Earth dist. -2977 Mar 31 j 15:21 15° **m** 48'27 17.81960 AU min. Earth dist. -2969 May 06 j 20:15 20°**♀**57'47 18.34285 AU direct -2977 Jun 17 j 01:05 13° Mp 45'29 direct -2969 Jul 23 j 12:32 18°**♀**56'14 conjunction -2977 Oct 04 j 20:23 18° m 04'41 0°41'25 conjunction -2969 Nov 08 j 01:09 23°**೨**02'51 0°20'47 minimum elong -2977 Oct 04 j 20:23 18° m 04'41 0°41'25 minimum elong -2969 Nov 08 j 01:09 23°**♀**02'51 0°20'45 max. Earth dist. -2977 Oct 04 j 21:39 18° m 04'53 19.85170 AU max. Earth dist. -2969 Nov 08 j 18:28 23°**2**05'27 20.37586 AU retrograde -2976 Jan 19 j 23:41 22° m 18'56 retrograde -2968 Feb 24 j 01:34 27° **2**10'39 opposition -2976 Apr 04 j 15:20 20° mp 18'41 0°45'00 opposition -2968 May 11 j 05:51 25° **2**10'57 0°21'15 min. Earth dist. -2976 Apr 04 i 13:19 20° m 18'53 17.88404 AU min. Earth dist. -2968 May 10 j 12:36 25° **2**12'42 18.40882 AU -2976 Jun 20 j 22:26 18° Mp 16'12 direct direct -2968 Jul 27 j 02:18 23°**2**11'28 conjunction -2976 Oct 08 j 11:57 22° m 33'52 0°39'29 conjunction -2968 Nov 11 j 10:08 27°**2**16'39 0°17'36 -2976 Oct 08 j 11:57 22° m 33'52 0°39'30 minimum elong -2968 Nov 11 j 10:08 27°**2**16'39 0°17'33 minimum elong max. Earth dist. -2976 Oct 08 j 15:17 22° m 34'23 max. Earth dist. -2968 Nov 12 j 04:37 27° **2**19'24 20.44170 AU 19 91658 AU -2975 Jan 23 j 18:03 26° m 47'17 -2968 Dec 31 j 00:32 0°M₊ retrograde -2975 Apr 09 j 13:43 24° m/47'09 -2967 Feb 27 j 15:39 1°M23'47 opposition 0°42'43 retrograde -2975 Apr 09 j 08:50 24° mp 47'39 17.94913 AU -2967 Apr 30 j 22:13 30°R Ω min. Earth dist. -2975 Jun 25 j 21:35 22° m 45'05 -2967 May 15 j 22:16 29° **2**24'11 0°17'40 direct opposition -2967 May 15 j 02:20 29°**£**26'12 18.47433 AU min. Earth dist. -2975 Oct 13 j 02:44 27° m 01'09 0°37'20 conjunction direct -2967 Jul 31 j 17:44 27°**£**25'07 -2975 Oct 13 j 02:44 27° m 01'09 0°37'21 -2967 Oct 21 j 09:20 minimum elong 0°M. -2975 Oct 13 j 08:02 27° m 01'58 19.98187 AU max. Earth dist. -2967 Nov 15 j 18:43 -2975 Dec 05 j 19:14 0°**♀** 1°M28'55 0°14'20 conjunction -2974 Jan 28 j 10:00 -2967 Nov 15 j 18:43 retrograde 1°**≏**13'45 minimum elong 1°ML28'55 0°14'18 -2974 Mar 26 j 05:27 30°R M behind sun begin -2967 Nov 15 j 15:29 1°M28'27 opposition -2974 Apr 14 j 11:36 29° m 13'42 0°40'12 behind sun end -2967 Nov 15 j 21:58 1°M29'24 min. Earth dist. -2974 Apr 14 j 05:48 29° Mp 14'18 18.01460 AU max. Earth dist. -2967 Nov 16 j 15:40 1°M32'03 20.50666 AU direct -2974 Jun 30 j 17:20 27° m 12'01 retrograde -2966 Mar 04 j 03:33 5°M35'25 -2974 Sep 23 j 17:20 -2966 May 20 j 13:59 3°M35'57 0°14'00 opposition min. Earth dist. -2966 May 19 j 17:29 3°MJ38'01 18.53871 AU -2974 Oct 17 j 16:33 1°**2**26'28 0°34'59 -2966 Aug 05 j 06:07 1°M37'17 conjunction direct -2974 Oct 17 j 16:33 1°**2**26'28 0°34'59 minimum elong -2974 Oct 17 i 23:35 -2966 Nov 20 i 02:41 5°M39'46 0°11'01 max. Earth dist. 1°**2**27'32 20.04743 AU conjunction -2973 Feb 02 i 03:09 -2966 Nov 20 i 02:40 retrograde 5°**£**38'14 minimum elong 5°M39'46 0°10'58 opposition -2973 Apr 19 j 08:32 3°**△**38'14 0°37'27 behind sun begin -2966 Nov 19 j 21:41 5°M39'03 min. Earth dist. -2973 Apr 18 i 23:51 3°**2**39'07 18.08004 AU behind sun end -2966 Nov 20 i 07:39 5°M40'30 direct -2973 Jul 05 j 14:34 1°**£**36'54 max. Earth dist. -2966 Nov 21 j 00:17 5°M-42'59 20.57028 AU retrograde -2965 Mar 08 i 16:32 9°M45'40 -2973 Oct 22 j 05:33 5°**£**49'45 0°32'26 min. Earth dist. -2965 May 24 j 06:21 7°ML48'35 18.60134 AU conjunction -2973 Oct 22 j 05:33 5°**£**49'45 0°32'25 -2965 May 25 j 04:56 7°M46'19 0°10'17 minimum elong opposition max. Earth dist. -2973 Oct 22 j 14:46 5°**♀**51'09 20.11279 AU direct -2965 Aug 09 j 19:46 5°M48'03 retrograde -2972 Feb 06 j 17:29 10°**£**00'40 opposition -2972 Apr 23 j 04:47 8°**♀**00'43 0°34'31 conjunction -2965 Nov 24 j 10:15 9°M49'17 0°07'40 min. Earth dist. -2972 Apr 22 j 19:18 8°**£**01'41 18.14544 AU minimum elong -2965 Nov 24 j 10:15 9°**™**49'17 0°07'35 -2972 Jul 09 j 08:29 5°**£**59'44 behind sun begin -2965 Nov 24 j 04:18 9°M48'26 direct -2965 Nov 24 j 16:12 9°M50'09 behind sun end -2972 Oct 25 j 17:38 10°**£**10'57 0°29'43 -2965 Nov 25 j 09:59 9°M52'48 20.63160 AU conjunction max. Earth dist. -2972 Oct 25 j 17:38 10°**2**10'58 minimum elong 0°29'42 retrograde -2964 Mar 12 j 03:41 13°M54'37 max. Earth dist. -2972 Oct 26 j 04:27 10°**⊆**12'36 20.17830 AU opposition -2964 May 28 j 19:19 11°M55'23 0°06'31 retrograde -2971 Feb 10 j 09:27 14°**£**21'03 min. Earth dist. -2964 May 27 j 20:26 11°M57'40 18.66136 AU min. Earth dist. -2971 Apr 27 j 11:41 12°**⊆**22'25 18.21098 AU direct -2964 Aug 13 j 07:39 9°M57'29 opposition -2971 Apr 28 j 00:13 12°**£**21'08 0°31'24 -2971 Jul 14 j 03:42 10° **2**20'30 -2964 Nov 27 j 17:22 13°M57'31 0°04'17 direct conjunction

-2964 Nov 27 j 17:22 13°M 57'31

minimum elong

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -2964 in astronomical counting style is the year 2965 BCE in historical counting style. behind sun begin -2964 Nov 27 j 10:56 13°M 56'36 behind sun begin -2958 Dec 22 i 03:44 8°**х** 20′55 -2964 Nov 27 j 23:48 13°M 58'27 -2958 Dec 22 j 06:39 8°×21'19 behind sun end behind sun end -2964 Nov 28 j 17:17 14° ML01'03 20.69017 AU -2958 Dec 23 j 08:19 8° ₹25'02 20.95587 AU max. Earth dist. max. Earth dist. -2964 Dec 15 j 13:06 15°M -2957 Apr 11 j 00:28 12° ₹23'18 retrograde -2963 Mar 16 j 15:39 -2957 Jun 27 j 02:44 10°**尽**26'45 18.97172 AU retrograde 18°**M**₀02'19 min. Earth dist. -2963 Jun 01 j 08:35 16°ML05'37 18.71833 AU -2957 Jun 28 j 05:30 min. Earth dist. opposition 10°**х** 24′05 0°-19'-5 8°**∡**¹27'35 -2957 Sep 12 j 03:44 opposition -2963 Jun 02 j 09:03 16°ML03'10 0°02'45 direct -2963 Jun 30 j 02:42 15°RM direct -2963 Aug 17 j 19:25 14°M05'36 conjunction -2957 Dec 26 j 10:10 12°**尽** 21'05 0°-18'-47 -2957 Dec 26 j 10:10 12° ₹21'05 -2963 Oct 03 j 10:09 15°M₀ minimum elong 0°18'53 -2957 Dec 27 j 14:44 12° ₹25'13 20.98591 AU max. Earth dist. -2963 Dec 02 j 00:13 18°ML04'31 0°00'50 -2956 Apr 14 j 07:15 16° ₹23'00 conjunction retrograde -2963 Dec 02 j 00:12 18°ML04'31 -2956 Jun 30 j 11:56 14° ₹ 26'25 19.00005 AU minimum elong 0°00'45 min. Earth dist. behind sun begin -2963 Dec 01 j 17:41 18°ML03'35 opposition -2956 Jul 01 j 14:46 14° ₹23'44 0°-22'-26 behind sun end -2963 Dec 02 j 06:44 18°ML05'27 direct -2956 Sep 15 j 11:02 12°**尽** 27'22 max. Earth dist. -2963 Dec 03 j 01:51 18°ML08'17 20.74517 AU desc. node -2962 Feb 27 j 11:17 21°M 57'16 conjunction -2956 Dec 29 j 15:00 16°**尽** 20'15 0°-21'-45 retrograde -2962 Mar 21 j 01:49 22° ML08'48 minimum elong -2956 Dec 29 j 15:00 16° ₹20'15 opposition -2962 Jun 06 j 22:11 20°ML09'43 0°-1'00 max. Earth dist. -2956 Dec 30 j 18:54 16° ₹24'16 21.01259 AU min. Earth dist. -2962 Jun 05 j 21:41 20°ML12'10 18.77137 AU retrograde -2955 Apr 18 j 16:30 20° ₹21'59 direct -2962 Aug 22 j 06:40 18°ML12'27 opposition -2955 Jul 05 j 23:33 18° **₹** 22'41 0°-25'-40 min. Earth dist. -2955 Jul 04 j 20:25 18° **2**725'23 19.02509 AU conjunction -2962 Dec 06 i 06:42 22° ML10'17 0°-2'-38 direct -2955 Sep 19 i 16:58 16° x 26'24 minimum elong -2962 Dec 06 i 06:41 22° ML10'17 0°02'43 behind sun begin -2962 Dec 06 i 00:10 22° ML09'21 conjunction -2954 Jan 02 j 19:54 20° ₹ 18'50 0°-24'-37 -2962 Dec 06 j 13:13 22°M11'12 -2954 Jan 02 i 19:54 20° ₹18'50 0°24'43 behind sun end minimum elong -2962 Dec 07 j 07:57 22°ML13'59 max. Earth dist. -2954 Jan 04 j 01:00 20° ₹23'00 21.03576 AU max Earth dist 20.79611 AU -2961 Mar 25 j 12:31 26° 11.14'04 -2954 Apr 22 j 23:43 24° ₹20'24 retrograde retrograde -2961 Jun 10 j 08:54 24° ML17'34 18.82015 AU -2954 Jul 09 j 04:52 22° ₹23'48 19.04642 AU min. Earth dist. min. Earth dist. 0°-4'-45 -2954 Jul 10 j 07:51 22° ₹21'06 -2961 Jun 11 j 10:26 24°M 15'01 0°-28'-46 opposition opposition -2961 Aug 26 j 16:48 22°ML17'58 -2954 Sep 23 j 23:16 20° ₹ 24'56 direct direct -2961 Dec 10 j 12:54 26°ML14'48 0°-6'00 -2953 Jan 07 j 00:45 24° **₹** 16'59 0°-27'-22 conjunction conjunction -2953 Jan 07 j 00:44 24° **₹**16'59 0°27'29 -2961 Dec 10 j 12:54 26°M 14'48 0°06'06 minimum elong minimum elong -2953 Jan 08 j 04:47 24° ₹21'00 21.05528 AU -2961 Dec 10 j 06:40 26° ML 13'55 behind sun begin max. Earth dist. -2961 Dec 10 j 19:08 26°ML15'41 -2953 Apr 27 j 08:26 28° ₹ 18'30 behind sun end retrograde -2961 Dec 11 j 15:34 26°M 18'42 20.84252 AU -2953 Jul 14 j 15:43 26° ₹ 19'12 0°-31'-44 max. Earth dist. opposition -2960 Mar 01 j 16:01 0°**∡**7 min. Earth dist. -2953 Jul 13 j 12:52 26° ₹21'53 19.06405 AU retrograde -2960 Mar 28 j 21:23 0°**х** 18′08 direct -2953 Sep 28 j 04:13 24°**尽**23'08 -2960 Apr 25 j 14:33 30°RM opposition -2960 Jun 14 j 22:15 28°ML19'04 0°-8'-27 conjunction -2952 Jan 11 j 05:49 28° **₹** 14'55 0°-29'-59 min. Earth dist. -2960 Jun 13 j 20:46 28° ML21'37 18.86428 AU minimum elong -2952 Jan 11 j 05:49 28° **₹** 14'55 0°30'05 direct -2960 Aug 30 j 02:59 26°M22'14 max. Earth dist. -2952 Jan 12 j 10:45 28° ₹ 19'03 21.07084 AU -2960 Dec 08 j 14:23 -2952 Feb 11 j 20:41 0°정 -2952 Apr 30 j 16:15 2°る16'25 retrograde 0°**₹**18'05 0°-9'-18 -2952 Jul 17 i 23:22 conjunction -2960 Dec 13 j 18:30 opposition 0°る17'09 0°-34'-32 -2952 Jul 16 i 20:54 minimum elong -2960 Dec 13 j 18:30 0°**х** 18′05 0°09'24 min. Earth dist. 0°る19'48 19.07749 AU -2952 Jul 25 i 03:12 30°R ⊀ behind sun begin -2960 Dec 13 j 13:00 0°**∡**17'18 behind sun end -2960 Dec 14 i 00:01 0° **₹**18'52 direct -2952 Oct 01 i 09:53 28° ₹21'11 max. Earth dist. -2960 Dec 14 i 20:44 0° **₹**21'54 20.88449 AU -2952 Dec 04 j 09:48 0°궁 retrograde -2959 Apr 02 j 07:23 4°×21'00 min. Earth dist. -2959 Jun 18 i 07:07 2°**₹**24'30 18.90411 AU -2951 Jan 14 i 10:51 2°**ප**12'47 0°-32'-27 conjunction -2959 Jun 19 j 09:23 2°**x**⁷21'53 0°-12'-5 -2951 Jan 14 j 10:51 2°る12'47 0°32'33 opposition minimum elong -2951 Jan 15 j 14:24 direct -2959 Sep 03 j 11:49 0°**х** 25′11 max. Earth dist. 2°る16'43 21.08218 AU retrograde -2951 May 05 j 00:51 6°る14'22 -2951 Jul 21 j 04:59 conjunction -2959 Dec 18 j 00:03 4°**₹**20'10 0°-12'-32 min. Earth dist. 4°る17'41 19.08654 AU -2959 Dec 18 j 00:03 4°**х** 20′10 0°12'38 opposition -2951 Jul 22 j 06:49 4°**ප**15'06 0°-37'-11 minimum elong -2959 Dec 17 j 19:48 4°**⋌**19'34 direct -2951 Oct 05 j 14:28 2°**る**19'11 behind sun begin 4°**х** 20′46 behind sun end -2959 Dec 18 j 04:18 -2959 Dec 19 j 03:44 4°**∡**′24'11 20.92211 AU -2950 Jan 18 j 16:28 6°る10'43 0°-34'-46 max. Earth dist. conjunction -2950 Jan 18 j 16:28 retrograde -2958 Apr 06 j 14:52 8°×722'41 minimum elong 6°**る**10'43 0°34'53 opposition -2958 Jun 23 j 19:43 6°**∡**°23'31 0°-15'-38 max. Earth dist. -2950 Jan 19 j 20:24 6°る14'42 21.08870 AU min. Earth dist. -2958 Jun 22 j 17:31 6°**≯**¹26′08 18.93975 AU retrograde -2950 May 09 j 08:54 10°る12'24 direct -2958 Sep 07 j 20:26 4°**х** 26′56 opposition -2950 Jul 26 j 13:49 8°**る**13'09 0°-39'-39 min. Earth dist. -2950 Jul 25 j 12:48 8°る15'40 19.09048 AU -2958 Dec 22 j 05:12 8°**∡**121'07 0°-15'-42 -2950 Oct 09 j 19:32 6°**ප**17'16 conjunction direct

-2958 Dec 22 j 05:12

minimum elong

8°**≯**21'07 0°15'49

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -2949 in astronomical counting style is the year 2950 BCE in historical counting style. -2949 Jan 22 j 22:13 10°る08'49 0°-36'-55 conjunction -2941 Feb 24 i 09:14 12°≈04'30 0°-47'-1 conjunction minimum elong -2949 Jan 22 j 22:13 10°る08'49 0°37'01 -2941 Feb 24 j 09:14 12°≈04'30 0°47'06 minimum elong -2949 Jan 24 j 00:10 10°る12'31 21.09003 AU max. Earth dist. -2941 Feb 25 j 01:10 12°≈06'47 20.91470 AU max. Earth dist. -2941 Apr 22 j 08:31 15°≈ -2949 May 13 j 17:40 14°る10'41 retrograde -2941 Jun 15 j 17:25 16°**≈**09'01 -2949 Jul 30 j 20:51 12°る11'24 0°-41'-56 opposition retrograde -2949 Jul 29 j 20:57 12°중13'48 19.08907 AU -2941 Aug 10 j 11:45 15°R≈ min. Earth dist. min. Earth dist. -2949 Oct 14 j 00:07 10°る15'29 -2941 Aug 31 j 10:43 14°≈10'07 18.89579 AU direct -2941 Sep 01 j 00:34 14°≈08'41 opposition 0°-52'-11 -2941 Nov 14 j 14:58 12°**≈**11'18 -2948 Jan 27 j 04:17 14°る07'09 0°-38'-54 conjunction direct -2948 Jan 27 j 04:17 14°**⋜**07'09 -2940 Feb 09 j 02:58 minimum elong 0°39'01 15°**≈** max. Earth dist. -2948 Jan 28 j 06:15 14°정10'51 21.08567 AU -2948 May 17 j 01:48 18°る09'12 -2940 Feb 28 j 18:44 16°≈06'39 0°-47'-18 retrograde conjunction -2948 Aug 02 j 04:45 16°る12'10 19.08175 AU -2940 Feb 28 j 18:44 16°≈06'39 0°47'22 min. Earth dist. minimum elong -2940 Feb 29 j 10:23 16°≈08'53 20.87560 AU opposition -2948 Aug 03 j 03:43 16°**⋜**09'51 0°-44'00 max. Earth dist. direct -2948 Oct 17 j 04:56 14°**♂**13'53 retrograde -2940 Jun 19 j 03:57 20°≈11'43 opposition -2940 Sep 04 j 07:13 18°≈11'17 0°-52'-22 conjunction -2947 Jan 30 j 10:41 18°**⋜**05'42 0°-40'-41 min. Earth dist. -2940 Sep 03 j 18:14 18°≈12'38 18.85518 AU minimum elong -2947 Jan 30 j 10:41 18° ₹305'42 0°40'47 direct -2940 Nov 17 j 21:20 16°≈13'40 max. Earth dist. -2947 Jan 31 j 10:21 18°る09'04 21.07556 AU retrograde -2947 May 21 j 10:41 22°る07'59 conjunction -2939 Mar 04 j 04:57 20°≈09'54 0°-47'-21 opposition -2947 Aug 07 j 10:24 20°る08'32 0°-45'-52 minimum elong -2939 Mar 04 j 04:57 20°≈09'54 0°47'25 min. Earth dist. -2947 Aug 06 j 12:53 20°る10'42 19.06880 AU max. Earth dist. -2939 Mar 04 i 17:50 20°≈11'44 20.83367 AU direct -2947 Oct 21 j 09:41 18°る12'26 retrograde -2939 Jun 23 j 14:48 24°≈15'35 opposition -2939 Sep 08 j 14:04 22°≈15'03 0°-52'-18 conjunction -2946 Feb 03 i 17:34 22°る04'30 0°-42'-16 min. Earth dist. -2939 Sep 08 j 03:10 22°≈16'11 18.81181 AU -2946 Feb 03 j 17:34 22°る04'30 0°42'23 direct -2939 Nov 22 j 02:47 20°≈17'12 minimum elong max. Earth dist. -2946 Feb 04 j 17:02 22°る07'50 21.05979 AU retrograde -2946 May 25 j 19:08 26°**⋜**07'01 -2938 Mar 08 j 16:08 24°≈14'24 0°-47'-10 conjunction -2946 Aug 11 j 16:53 24°る07'27 0°-47'-31 -2938 Mar 08 j 16:08 24°≈14'24 0°47'14 opposition minimum elong -2946 Aug 10 j 20:23 24°る09'32 19.05026 AU -2938 Mar 09 j 04:22 24°≈16'10 20.78881 AU min. Earth dist. max. Earth dist. -2946 Oct 25 j 14:45 22°る11'11 -2938 Jun 28 j 02:03 28°≈20'44 direct retrograde -2938 Sep 12 j 21:14 26°≈20'09 0°-51'-58 opposition -2945 Feb 08 j 00:32 26°る03'34 0°-43'-39 conjunction min. Earth dist. -2938 Sep 12 j 11:26 26°≈21'10 18.76531 AU -2945 Feb 08 j 00:32 26° ₹303'34 0°43'45 -2938 Nov 26 j 09:29 24°≈22'04 minimum elong direct max. Earth dist. -2945 Feb 08 j 21:41 26°る06'34 21.03882 AU -2937 Mar 13 j 03:48 28°≈20'19 0°-46'-44 -2945 May 13 j 23:05 0°≈ conjunction 0°**≈**06'23 -2945 May 30 j 03:49 -2937 Mar 13 j 03:48 28°≈20'19 0°46'48 retrograde minimum elong -2945 Jun 15 j 11:55 30°R♂ max. Earth dist. -2937 Mar 13 j 12:57 28°≈21'38 20.74077 AU opposition -2945 Aug 15 j 23:15 28°る06'39 0°-48'-56 -2937 Apr 11 j 20:22 0°**)**€ min. Earth dist. -2945 Aug 15 j 04:18 28°る08'34 19.02695 AU retrograde -2937 Jul 02 j 13:59 2°**¥**27′22 direct -2945 Oct 29 j 19:02 26°쥥10'11 opposition -2937 Sep 17 j 04:50 0° **★**26'41 0°-51'-23 -2944 Feb 11 j 11:13 min. Earth dist. -2937 Sep 16 j 21:26 0°¥27'27 18.71563 AU -2937 Sep 27 j 23:45 30°R≈ -2944 Feb 12 j 08:03 0°≈02'58 0°-44'-49 direct -2937 Nov 30 j 16:09 28°≈28'20 conjunction -2944 Feb 12 j 08:03 0°≈02'58 0°44'55 -2936 Jan 30 j 21:24 0°**∀** minimum elong -2944 Feb 13 i 05:06 0°≈05'58 21.01330 AU max. Earth dist. -2944 Jun 02 j 12:54 -2936 Mar 16 i 16:36 2°\ 27'44 0°-46'-4 retrograde 4°≈06'08 conjunction min. Earth dist. -2944 Aug 18 j 11:26 2°≈08'05 18.99934 AU minimum elong -2936 Mar 16 i 16:36 2°\;\;27'44\ 0°46'08 2°**升**28'55 20.68937 AU opposition -2944 Aug 19 j 05:31 2°≈06'14 0°-50'-6 max. Earth dist. -2936 Mar 17 i 00:46 direct -2944 Nov 02 j 00:41 0°≈09'33 retrograde -2936 Jul 06 i 02:13 6°\ 35'30 opposition -2936 Sep 20 j 12:43 4°\ 34'44 0°-50'-31 -2943 Feb 15 j 15:49 4°≈02'49 0°-45'-46 min. Earth dist. -2936 Sep 20 j 06:38 4°₩35'22 18.66236 AU conjunction -2943 Feb 15 j 15:49 4°≈02'49 0°45'53 direct -2936 Dec 03 j 23:58 2°\ 36'06 minimum elong -2943 Feb 16 j 10:32 max. Earth dist. 4°≈05'29 20.98386 AU retrograde -2943 Jun 06 j 21:56 8°≈06'24 conjunction -2935 Mar 21 j 06:08 6°\(\)36'42 0°-45'-9 -2943 Aug 23 j 11:52 opposition 6°≈06'20 0°-51'-3 minimum elong -2935 Mar 21 j 06:08 6°**)**€36'42 0°45'11 min. Earth dist. -2943 Aug 22 j 19:24 6°**≈**08'01 18.96811 AU max. Earth dist. -2935 Mar 21 j 10:46 6°**升**37'22 20.63431 AU -2943 Nov 06 j 04:30 4°≈09'24 retrograde -2935 Jul 10 j 14:53 10° **★**45'13 direct -2935 Sep 24 j 21:14 8°\(\)\(44'20\) 0°-49'-22 opposition -2942 Feb 20 j 00:22 8°≈03'17 0°-46'-30 min. Earth dist. -2935 Sep 24 j 17:54 8°**¥**44'41 18.60544 AU conjunction -2942 Feb 20 j 00:22 direct -2935 Dec 08 j 07:53 6°**)** 45′22 minimum elong 8°≈03'17 0°46'35 max. Earth dist. -2942 Feb 20 j 18:50 8°≈05'55 20.95085 AU -2934 Mar 25 j 20:42 10° **★**47'13 0°-43'-59 retrograde -2942 Jun 11 j 07:44 12°≈07'17 conjunction opposition -2942 Aug 27 j 18:02 10°**≈**07'06 0°-51'-44 minimum elong -2934 Mar 25 j 20:42 10° **★**47'13 0°44'02 min. Earth dist. -2942 Aug 27 j 02:28 10°≈08'41 18.93341 AU max. Earth dist. -2934 Mar 26 j 00:00 10° **★**47'42 20.57554 AU direct -2942 Nov 10 j 10:40 8°≈09'56 retrograde -2934 Jul 15 j 04:19 14° **€** 56'29

opposition

-2934 Sep 29 j 05:57 12° ¥ 55'28 0°-47'-57

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 32

•	omena of Uranus fr		_	` //		, .	age 32
	nical year style is used: The	-					
min. Earth dist.	-2934 Sep 29 j 03:57		18.54484 AU	min. Earth dist.	-2926 Nov 02 j 11:05		18.010/1 AU
direct	-2934 Dec 12 j 17:29	10°大56'08		direct	-2925 Jan 15 j 19:48	15° Y 20'49	
. ,.	2022 M 20:11 50	1401/50117	00 421 24		2025 M 05:10.22	1000025155	00 221 20
conjunction	-2933 Mar 30 j 11:50			conjunction	-2925 May 05 j 18:32		
minimum elong	-2933 Mar 30 j 11:50		0°42'36	minimum elong	-2925 May 05 j 18:32		0°23'20
max. Earth dist.	-2933 Mar 30 j 11:37		20.51342 AU	max. Earth dist.	-2925 May 05 j 02:30		19.97852 AU
retrograde	-2933 Jul 19 j 17:10		00.461.15	retrograde	-2925 Aug 24 j 00:45		00.24.5
opposition	-2933 Oct 03 j 15:20			opposition	-2925 Nov 06 j 13:38		
min. Earth dist.	-2933 Oct 03 j 16:07		18.48130 AU	min. Earth dist.	-2925 Nov 07 j 03:50		17.94667 AU
direct	-2933 Dec 17 j 02:25	15° ∺ 08'24		direct	-2924 Jan 20 j 09:58	19° 'Y' 47'22	
. ,.	2022 4 02:02:40	1001/12/54	00 401 55		2024 M 00 : 17 00	2400004105	00.201.5
conjunction	-2932 Apr 03 j 03:49			conjunction	-2924 May 09 j 17:09	24° Y 04'05	0°-20'-5 0°20'04
minimum elong	-2932 Apr 03 j 03:49			minimum elong	-2924 May 09 j 17:10		
max. Earth dist.	-2932 Apr 03 j 02:26		20.4486 / AU	max. Earth dist.	-2924 May 08 j 23:31		19.91527 AU
retrograde	-2932 Jul 23 j 07:52		00 441 20	retrograde	-2924 Aug 27 j 21:28		00 201 25
opposition	-2932 Oct 07 j 01:02			opposition	-2924 Nov 10 j 04:33		0°-20'-25
min. Earth dist.	-2932 Oct 07 j 02:57		18.41536 AU	min. Earth dist.	-2924 Nov 10 j 19:23		17.88403 AU
direct	-2932 Dec 20 j 13:51	19° H 22'12		direct	-2923 Jan 24 j 03:41	24°° y ′16′00	
aaniunatian	2021 Apr 07; 20:26	220¥20105	0°-39'-2	conjunction	2022 May 14 ; 16:47	28° Ƴ 34'20	0°-16'-40
conjunction	-2931 Apr 07 j 20:36 -2931 Apr 07 j 20:36			·	-2923 May 14 j 16:47		0°16'38
minimum elong				minimum elong	-2923 May 14 j 16:47		19.85316 AU
max. Earth dist.	-2931 Apr 07 j 15:54		20.38187 AU	max. Earth dist.	-2923 May 13 j 21:11		19.85316 AU
retrograde	-2931 Jul 27 j 21:04		00 421 0		-2923 Jun 07 j 18:42	0°8	
opposition	-2931 Oct 11 j 11:14		0°-42'-8	retrograde	-2923 Sep 01 j 16:21	2° 8 52'25	00.161.00
min. Earth dist.	-2931 Oct 11 j 15:56		18.34/90 AU	opposition	-2923 Nov 14 j 20:26	0° 8 50'15	
direct	-2931 Dec 24 j 23:55	23° X 37'33		min. Earth dist.	-2923 Nov 15 j 13:51	_	17.82262 AU
					-2923 Dec 04 j 17:35		
conjunction	-2930 Apr 12 j 14:19	27°) 44′54		direct	-2922 Jan 28 j 19:32		
minimum elong	-2930 Apr 12 j 14:19	27°) 44′54			-2922 Mar 23 j 16:29	0° 8	
max. Earth dist.	-2930 Apr 12 j 08:28		20.31390 AU				
	-2930 May 22 j 22:49	0° Υ		conjunction	-2922 May 19 j 17:07	3° 8 06'34	0°-13'-8
retrograde	-2930 Aug 01 j 12:59	1° Υ '57'16		minimum elong	-2922 May 19 j 17:07	3° 8 06'34	0°13'06
	-2930 Oct 14 j 04:28	30° ₹		behind sun begin	-2922 May 19 j 13:14	3° 8 06'00	
opposition	-2930 Oct 15 j 21:57	29° ¥ 55'35		behind sun end	-2922 May 19 j 21:01	3° 8 07'09	
min. Earth dist.	-2930 Oct 16 j 03:30		18.27956 AU	max. Earth dist.	-2922 May 18 j 19:26		19.79238 AU
direct	-2930 Dec 29 j 13:10			retrograde	-2922 Sep 06 j 14:14	7° 8 25'23	
	-2929 Mar 11 j 22:12	0 ° $\mathbf{\gamma}$		opposition	-2922 Nov 19 j 13:05	5° 8 23'11	0°-12'-33
				min. Earth dist.	-2922 Nov 20 j 07:06	_	17.76249 AU
conjunction	-2929 Apr 17 j 08:30	2° Y 03'23	0°-34'-37	direct	-2921 Feb 02 j 15:25	3° 8 19'16	
minimum elong	-2929 Apr 17 j 08:30	2° Y 03'23	0°34'38				
max. Earth dist.	-2929 Apr 16 j 23:46	2° Y '02'06	20.24539 AU	conjunction	-2921 May 24 j 18:04	7° 8 40'40	0°-9'-29
retrograde	-2929 Aug 06 j 03:03	6° Y 16′36		minimum elong	-2921 May 24 j 18:04	7° 8 40'40	0°09'27
opposition	-2929 Oct 20 j 09:25	4° Υ 14'45	0°-37'-1	behind sun begin	-2921 May 24 j 12:27	7° 8 39'50	
min. Earth dist.	-2929 Oct 20 j 17:31	4° Υ 13'53	18.21115 AU	behind sun end	-2921 May 24 j 23:41	7° 8 41'30	
direct	-2928 Jan 03 j 00:28	2° Y 13′18		max. Earth dist.	-2921 May 23 j 18:59	7° 8 37'10	19.73278 AU
				retrograde	-2921 Sep 11 j 09:59	12° 8 00'10	
conjunction	-2928 Apr 21 j 03:46	6° Ƴ 23'39	0°-32'-5	opposition	-2921 Nov 24 j 06:41	9° 8 57'55	0°-8'-27
minimum elong	-2928 Apr 21 j 03:47	6° Y 23′39	0°32'05	min. Earth dist.	-2921 Nov 25 j 03:02	9° 8 55'42	17.70368 AU
max. Earth dist.	-2928 Apr 20 j 17:53	6° Ƴ 22'12	20.17718 AU	direct	-2920 Feb 07 j 09:29	7° 8 53'40	
retrograde	-2928 Aug 09 j 20:22	10° Ƴ 37'40					
opposition	-2928 Oct 23 j 21:16	8° Ƴ 35'42		conjunction	-2920 May 28 j 19:45	12° 8 16'30	0°-5'-46
min. Earth dist.	-2928 Oct 24 j 05:59	8° Y 34'46	18.14322 AU	minimum elong	-2920 May 28 j 19:45	12° 8 16'30	0°05'43
direct	-2927 Jan 06 j 15:06	6° Ƴ 33'52		behind sun begin	-2920 May 28 j 13:15	12° 8 15'32	
	-			behind sun end	-2920 May 29 j 02:15		
conjunction	-2927 Apr 25 j 23:51	10° Ƴ 45'46	0°-29'-21	max. Earth dist.	-2920 May 27 j 18:22	12° 8 12'38	19.67487 AU
minimum elong	-2927 Apr 25 j 23:52	10° Ƴ 45'46	0°29'22		-2920 Jul 15 j 19:15		
max. Earth dist.	-2927 Apr 25 j 11:19		20.10966 AU	retrograde	-2920 Sep 15 j 08:10		
retrograde	-2927 Aug 14 j 12:12	15° Ƴ 00'37		<i>-</i>	-2920 Nov 18 j 03:13		
opposition	-2927 Oct 28 j 10:04	12° Y ′58′33	0°-30'-59	opposition	-2920 Nov 28 j 00:45		0°-4'-15
min. Earth dist.	-2927 Oct 28 j 21:17	12° Y 57′21	18.07631 AU	min. Earth dist.	-2920 Nov 28 j 21:43		17.64675 AU
direct	-2926 Jan 11 j 03:55	10° Υ 56'20		direct	-2919 Feb 11 j 07:32		
	<i>j</i>	- *			-2919 May 01 j 22:01		
conjunction	-2926 Apr 30 j 20:47	15° Y 09'50	0°-26'-26		, j	-	
minimum elong	-2926 Apr 30 j 20:47	15° Υ 09'50	0°26'26	conjunction	-2919 Jun 02 j 22:07	16° 8 53'55	0°-1'-58
max. Earth dist.	-2926 Apr 30 j 06:57	15° Y °07'47		minimum elong	-2919 Jun 02 j 22:08		0°01'56
retrograde	-2926 Aug 19 j 07:03	19° Y ′25'30		behind sun begin	-2919 Jun 02 j 15:21		
opposition	-2926 Nov 01 j 23:23		0°-27'-39	behind sun end	-2919 Jun 03 j 04:56		
тт.						. 02.00	

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, Attention, astronomical year style is used: The year -2919 in astronomical counting style is the year 2920 BCE in historical counting style. -2919 Jun 01 i 20:01 16°849'56 19.61894 AU minimum elong -2912 Jul 06 j 21:57 19°**Д**50'07 0°24'05 max. Earth dist. -2919 Sep 20 j 04:38 21°814'35 -2912 Jul 05 j 16:11 19°**Д**45'28 19.34105 AU retrograde max Earth dist -2919 Dec 02 j 19:50 19°812'13 0°00'-1 retrograde -2912 Oct 22 j 20:41 24° II 13'11 opposition -2919 Dec 03 j 18:40 19°**8**09'43 17.59213 AU -2911 Jan 04 j 03:36 22° **Ⅱ**10'50 0°28'35 min. Earth dist. opposition -2919 Dec 05 j 01:52 19°806'19 min. Earth dist. -2911 Jan 05 j 04:48 22°**Ц**08'05 17.33193 AU asc. node -2911 Mar 21 j 08:57 20°**Ц**04'19 direct -2918 Feb 16 j 03:51 17°**8**07'15 direct max. Earth dist. max. Earth dist. -2918 Jun 06 j 20:27 21°**8**28'27 19.56580 AU -2911 Jul 10 j 21:25 24°**Ⅲ**31'53 19.32340 AU -2918 Jun 08 j 00:40 21°**8**32'47 0°01'58 conjunction conjunction -2911 Jul 12 j 01:57 24°**Ⅲ**36'21 0°27'18 -2911 Jul 12 j 01:57 24°**Ⅲ**36'21 minimum elong -2918 Jun 08 j 00:39 21°**8**32'47 0°02'03 minimum elong 0°27'23 -2911 Oct 27 j 22:26 28°**Д**59'32 behind sun begin -2918 Jun 07 j 17:52 21°**8**31'46 retrograde -2918 Jun 08 j 07:26 21°**8**33'48 -2910 Jan 09 j 03:52 26°**Ⅲ**57'19 behind sun end opposition 0°32'10 -2910 Jan 10 j 04:15 26° **I** 54'39 17.31703 AU retrograde -2918 Sep 25 j 03:15 25°**8**53'58 min. Earth dist. opposition -2918 Dec 07 j 15:28 23°851'31 0°04'14 direct -2910 Mar 26 j 11:53 24°**耳**50'48 min. Earth dist. -2918 Dec 08 j 14:43 23°**8**48'58 17.54068 AU max. Earth dist. -2910 Jul 16 j 01:06 29°**Ⅱ**18'49 19.31123 AU direct -2917 Feb 21 j 03:47 21°846'12 max. Earth dist. -2917 Jun 11 j 23:43 26°**8**08'38 19.51607 AU conjunction -2910 Jul 17 j 05:40 29°**Ⅲ**23'19 0°30'24 minimum elong -2910 Jul 17 j 05:40 29°**Ⅲ**23'18 0°30'30 conjunction -2917 Jun 13 j 03:47 26°**8**12'57 0°05'48 -2910 Jul 26 j 23:20 0ಂಣ minimum elong -2917 Jun 13 j 03:46 26° 812'57 0°05'52 retrograde -2910 Nov 01 j 22:22 3°9546'33 behind sun begin -2917 Jun 12 j 21:18 26° 811'59 opposition -2909 Jan 14 j 04:43 1°9544'28 0°35'32 behind sun end -2917 Jun 13 j 10:14 26°8 13'55 min. Earth dist. -2909 Jan 15 i 05:30 1°5641'46 17.30765 AU -2917 Aug 25 j 12:00 Π °0 -2909 Mar 02 i 07:59 30°R II retrograde -2917 Sep 30 i 00:26 0°П34'34 direct -2909 Mar 31 j 13:59 29°**Ⅲ**37'57 -2917 Nov 05 j 02:13 30°R8 -2909 Apr 29 i 12:53 0ಂತಾ -2917 Dec 12 j 11:48 28°\(\mathbf{3}2'04 \) 0°08'30 -2909 Jul 21 j 05:47 4°506'26 19.30442 AU opposition max. Earth dist. -2917 Dec 13 j 12:16 28°\(\mathbf{2}29'23\) 17.49296 AU min. Earth dist. -2916 Feb 26 j 02:09 26°826'26 -2909 Jul 22 j 09:24 4°910'47 0°33'19 direct conjunction -2909 Jul 22 j 09:24 -2916 Jun 02 j 13:57 0°Π 4°9310'47 0°33'24 minimum elong -2909 Nov 07 j 00:11 -2916 Jun 16 j 01:10 0°**Д**49'42 19.47051 AU 8°933'59 max. Earth dist. retrograde -2908 Jan 19 j 05:49 6°532'02 0°38'39 opposition -2916 Jun 17 j 07:02 0°**Д**54'19 0°09'35 -2908 Jan 20 j 05:23 conjunction min. Earth dist. 6°529'28 17.30327 AU -2916 Jun 17 j 07:01 0°∏54'19 0°09'40 direct -2908 Apr 04 j 17:53 4°925'34 minimum elong -2908 Jul 25 j 09:56 -2916 Jun 17 j 01:29 0° TI 53′29 8°554'17 19.30243 AU behind sun begin max. Earth dist. -2916 Jun 17 j 12:33 0°**I**55′09 behind sun end -2916 Oct 03 j 23:22 5°**Ⅱ**16′20 -2908 Jul 26 j 13:00 8°958'33 0°36'00 retrograde conjunction -2908 Jul 26 j 13:00 opposition -2916 Dec 16 j 08:50 3°**Ⅱ**13'47 0°12'43 minimum elong 8°958'33 0°36'06 min. Earth dist. -2916 Dec 17 j 09:35 3°**Ⅱ**11'05 17.44978 AU retrograde -2908 Nov 10 j 23:46 13°521'38 -2915 Mar 02 j 03:12 1°**Ⅲ**07'52 opposition -2907 Jan 23 j 07:37 11°519'47 0°41'31 direct max. Earth dist. -2915 Jun 21 j 05:36 5°**I**32'17 19.42966 AU min. Earth dist. -2907 Jan 24 j 07:34 11°517'11 17.30375 AU direct -2907 Apr 09 j 21:01 9°9513'22 -2915 Jun 22 j 10:39 5°**Ⅱ**36'47 0°13'20 conjunction -2915 Jun 22 j 10:39 5°**Ⅱ**36'47 0°13'25 -2907 Jul 31 j 16:04 13°546'21 minimum elong conjunction -2915 Jun 22 j 06:57 5°**Ⅱ**36'14 -2907 Jul 31 j 16:04 13°5046'20 0°38'31 behind sun begin minimum elong -2915 Jun 22 j 14:21 5°**Ⅲ**37'21 -2907 Jul 30 j 13:42 13°542'11 19.30527 AU behind sun end max. Earth dist. 9°**Ⅱ**59'08 retrograde -2915 Oct 08 i 21:49 retrograde -2907 Nov 16 i 01:00 18°509'13 opposition -2915 Dec 21 i 06:36 7°**II**56'35 0°16'51 opposition -2906 Jan 28 i 09:37 16°507'28 0°44'05 min. Earth dist. -2915 Dec 22 i 07:45 7°**Ц**53'49 17.41155 AU min. Earth dist. -2906 Jan 29 i 07:48 16°505'03 17.30885 AU direct -2914 Mar 07 i 03:47 5°**Ⅱ**50′26 direct -2906 Apr 15 j 02:39 14°501'07 max. Earth dist. -2914 Jun 26 j 07:59 10°**П**15'34 19.39421 AU -2906 Aug 05 j 18:50 18°533'54 0°40'35 conjunction -2914 Jun 27 j 14:16 10°**Ⅲ**20'17 0°17'00 -2906 Aug 05 j 18:50 18°533'54 conjunction minimum elong 0°40'40 -2914 Jun 27 j 14:16 10°**Ⅲ**20'17 max. Earth dist. -2906 Aug 04 j 17:58 18°\$29'58 19.31270 AU minimum elong 0°17'04 -2914 Oct 13 j 20:58 14°**Д**42'55 retrograde retrograde -2906 Nov 20 j 23:38 22°556'29 opposition -2914 Dec 26 j 05:01 12°**II**40'23 0°20'54 opposition -2905 Feb 02 j 11:55 20°554'48 0°46'20 -2914 Dec 27 j 06:14 12° **II** 37'37 17.37912 AU min. Earth dist. min. Earth dist. -2905 Feb 03 j 10:13 20°552'23 17.31871 AU direct -2913 Mar 12 j 05:19 10°**Ⅱ**34'03 direct -2905 Apr 20 j 06:38 18°9548'31 -2913 Jul 02 j 18:03 15°**Ⅲ**04'44 0°20'34 -2905 Aug 10 j 20:54 23°520'58 conjunction conjunction 0°42'27 -2913 Jul 02 j 18:03 15°**Ⅲ**04'44 0°20'39 -2905 Aug 10 j 20:54 23°520'58 minimum elong minimum elong 0°42'33 -2913 Jul 01 j 13:00 15°**Д**00'12 19.36468 AU max. Earth dist. max. Earth dist. -2905 Aug 09 j 20:37 23°517'07 19.32500 AU retrograde -2913 Oct 18 j 21:05 19°**Ⅲ**27'36 retrograde -2905 Nov 26 j 00:02 27°543'11 opposition -2913 Dec 31 j 04:03 17°**II**25'09 0°24'49 opposition -2904 Feb 07 j 14:10 25°541'33 0°48'15 min. Earth dist. -2912 Jan 01 j 04:58 17°**Ⅲ**22'25 17.35249 AU min. Earth dist. -2904 Feb 08 j 10:24 25°539'22 17.33330 AU direct -2912 Mar 16 j 07:19 15°**Ⅲ**18'42 direct -2904 Apr 24 j 12:47 23°535'21 -2912 Jul 06 j 21:57 19°**Д**50'07 0°24'00 -2904 Aug 14 j 22:30 28°507'18 0°44'02 conjunction conjunction

Planetary Phenomena of Uranus from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 34

Attention, astronomical year style is used: The year -2904 in astronomical counting style is the year 2905 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	ne year -2904	in astronomical
minimum elong	-2904 Aug 14 j 22:30	28° 5 07'18	0°44'06
max. Earth dist.	-2904 Aug 14 j 00:30	28° © 03'49	19.34200 AU
	-2904 Sep 14 j 12:41	$0^{\circ}\Omega$	
retrograde	-2904 Nov 29 j 22:11	2° Ω 29'03	
opposition	-2903 Feb 11 j 16:39	0° Ω 27'29	0°49'50
min. Earth dist.	-2903 Feb 12 j 12:33	0° Ω 25'21	17.35278 AU
	-2903 Feb 22 j 10:12	30° ₹ 5	
direct	-2903 Apr 29 j 17:00	28°521'24	
	-2903 Jul 01 j 15:33	0 $^{\circ}$ Ω	
		20.0.52140	004545
conjunction	-2903 Aug 19 j 23:14	2° Ω 52'40	0°45'17
minimum elong	-2903 Aug 19 j 23:14	2° Ω 52'40	0°45'22
max. Earth dist.	-2903 Aug 19 j 01:59	2° Ω 49'19	19.36416 AU
retrograde	-2903 Dec 04 j 21:53	7° Ω 13'55	
opposition	-2902 Feb 16 j 19:00	5° Ω 12'23	0°51'03
min. Earth dist.	-2902 Feb 17 j 12:24	5° Ω 10'31	17.37756 AU
direct	-2902 May 04 j 22:16	3° Ω 06′25	
conjunction	-2902 Aug 24 j 23:11	7° Ω 36'54	0°46'14
minimum elong	-2902 Aug 24 j 23:10	7° Ω 36'54	0°46'18
max. Earth dist.	-2902 Aug 24 j 05:01	7° Ω 34'02	19.39162 AU
retrograde	-2902 Dec 09 j 19:40	11° Ω 57'35	
opposition	-2901 Feb 21 j 21:20	9° £ 56'06	0°51'56
min. Earth dist.	-2901 Feb 22 j 13:44	9° £ 54'21	17.40772 AU
direct	-2901 May 10 j 01:20	7° Ω 50'19	
	, ,		
conjunction	-2901 Aug 29 j 22:17	12° Ω 19'52	0°46'52
minimum elong	-2901 Aug 29 j 22:17	12° Ω 19′52	0°46'55
max. Earth dist.	-2901 Aug 29 j 05:07	12° Ω 17′10	19.42467 AU
	-2901 Oct 14 j 06:25	15° Ω	
retrograde	-2901 Dec 14 j 18:50	16° Ω 39'56	
	-2900 Feb 18 j 12:49	15°R Ω	
opposition	-2900 Feb 26 j 23:14	14° £ 38'31	0°52'27
min. Earth dist.	-2900 Feb 27 j 13:02	14° Ω 37'03	17.44360 AU
direct	-2900 May 14 j 05:04	12° Ω 32'57	
	-2900 Jul 31 j 12:46	15° Ω	
a anium ati a	2000 Con 02:20 47	17° Ω 01'31	0047!11
conjunction	-2900 Sep 02 j 20:47 -2900 Sep 02 j 20:47		0°47'11
minimum elong max. Earth dist.		17° Ω 01'31	0°47'14 19.46338 AU
max. Earth dist.	-2900 Sep 02 j 06:59	16° Ω 59'20	19.40338 AU

-2900 Dec 18 j 16:17 $21^{\circ}\Omega 20'55$

retrograde

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 1

•	omena of Uranus fr		_	` //		, 1	age I
Attention, astronom	nical year style is used: The		in astronomical cou				
,	-2900 Feb 18 j 12:49		0050107	conjunction	-2893 Oct 05 j 09:53		
opposition	-2900 Feb 26 j 23:14			minimum elong	-2893 Oct 05 j 09:53	•	0°41'01
min. Earth dist.	-2900 Feb 27 j 13:02		17.44360 AU	max. Earth dist.	-2893 Oct 05 j 10:45		19.85256 AU
direct	-2900 May 14 j 05:04			retrograde	-2892 Jan 20 j 13:39		
	-2900 Jul 31 j 12:46	15° 82		opposition	-2892 Apr 05 j 04:26		0°44'31
				min. Earth dist.	-2892 Apr 05 j 02:37		17.88456 AU
conjunction	-2900 Sep 02 j 20:47			direct	-2892 Jun 21 j 11:35	19° m) 24'24	
minimum elong	-2900 Sep 02 j 20:47						
max. Earth dist.	-2900 Sep 02 j 06:59		19.46338 AU	conjunction	-2892 Oct 09 j 01:34		0°39'02
retrograde	-2900 Dec 18 j 16:17			minimum elong	-2892 Oct 09 j 01:34		0°39'02
opposition	-2899 Mar 03 j 01:13			max. Earth dist.	-2892 Oct 09 j 04:39		19.91676 AU
min. Earth dist.	-2899 Mar 03 j 13:23		17.48500 AU	retrograde	-2891 Jan 24 j 07:56		
direct	-2899 May 19 j 07:12	17° Ω 14'21		opposition	-2891 Apr 10 j 02:50	25° m 55'22	0°42'12
				min. Earth dist.	-2891 Apr 09 j 22:15		17.94895 AU
conjunction	-2899 Sep 07 j 18:09		0°47'11	direct	-2891 Jun 26 j 10:50	23° m 53'17	
minimum elong	-2899 Sep 07 j 18:09						
max. Earth dist.	-2899 Sep 07 j 05:39	21° Ω 39'50	19.50759 AU	conjunction	-2891 Oct 13 j 16:11	28° Mp 09'22	0°36'51
retrograde	-2899 Dec 23 j 14:44	26° Ω 00'33		minimum elong	-2891 Oct 13 j 16:12	28° Mp 09'22	0°36'51
opposition	-2898 Mar 08 j 02:51	23° Ω 59'24	0°52'26	max. Earth dist.	-2891 Oct 13 j 21:09	28° m 10'08	19.98140 AU
min. Earth dist.	-2898 Mar 08 j 12:31	23° Ω 58′23	17.53182 AU		-2891 Nov 13 j 15:23	0∘ ⊽	
direct	-2898 May 24 j 09:37	21° Ω 54'28		retrograde	-2890 Jan 28 j 23:17	2° £ 21'57	
				opposition	-2890 Apr 15 j 00:36	0° £ 21'52	0°39'38
conjunction	-2898 Sep 12 j 14:57	26° Ω 20'44	0°46'52	min. Earth dist.	-2890 Apr 14 j 19:02	0° £ 22'27	18.01386 AU
minimum elong	-2898 Sep 12 j 14:57	26°Ω20'44	0°46'56		-2890 Apr 23 j 22:17	30°R, M)	
max. Earth dist.	-2898 Sep 12 j 05:49	26°Ω19'18	19.55689 AU	direct	-2890 Jul 01 j 06:50	28° m/20'09	
man. Barur dige.	-2898 Nov 20 j 17:52	0°m	17.00007110		-2890 Sep 03 j 02:04	0∘ ⊽	
retrograde	-2898 Dec 28 j 11:43	0° Mp 38'47			2070 Sep 03 j 02.01	· –	
retrograde	-2897 Feb 05 j 12:05	30°R Ω		conjunction	-2890 Oct 18 j 05:59	2° ₽ 34'36	0°34'28
opposition	-2897 Mar 13 j 04:04	28° Ω 37'48	0°51'55	minimum elong	-2890 Oct 18 j 05:59	2° ₽ 34'36	
min. Earth dist.	-2897 Mar 13 j 11:46		17.58324 AU	max. Earth dist.	-2890 Oct 18 j 12:56		20.04657 AU
direct	-2897 May 29 j 10:58	26° Ω 33'15	17.36324 AU	retrograde	-2889 Feb 02 j 16:05	2 = 35 40 6° £ 46'19	20.04037 AU
unect	• •	0° m)		opposition	•	0 = 40 19 4° Ω 46'17	0°36'52
	-2897 Sep 01 j 20:10	V III			-2889 Apr 19 j 21:14		
. ,.	2007.0 17:10.47	00 m , 50115	0046116	min. Earth dist.	-2889 Apr 19 j 12:48	4° - 247'09	18.07915 AU
conjunction	-2897 Sep 17 j 10:47	0° m 58'15		direct	-2889 Jul 06 j 03:50	2° ≏ 44'54	
minimum elong	-2897 Sep 17 j 10:47	0° m 58'15			2000 0 + 22 : 10 51	60 0 57144	0021152
max. Earth dist.	-2897 Sep 17 j 02:58		19.61044 AU	conjunction	-2889 Oct 22 j 18:51	6° £ 57'44	0°31'53
retrograde	-2896 Jan 02 j 09:01	5° m 15'36		minimum elong	-2889 Oct 22 j 18:51	6° £ 57'44	
opposition	-2896 Mar 17 j 05:02	3° m) 14'48	0°51'03	max. Earth dist.	-2889 Oct 23 j 03:59		20.11208 AU
min. Earth dist.	-2896 Mar 17 j 10:45		17.63868 AU	retrograde	-2888 Feb 07 j 05:57	11° ≏ 08'36	
direct	-2896 Jun 02 j 11:57	1° m) 10'39		opposition	-2888 Apr 23 j 17:29	9° ₽ 08'36	0°33'54
				min. Earth dist.	-2888 Apr 23 j 08:02	9° ≏ 09'34	18.14503 AU
conjunction	-2896 Sep 21 j 05:51	5° Mg 34′20	0°45'22	direct	-2888 Jul 09 j 21:48	7° ≏ 07'34	
minimum elong	-2896 Sep 21 j 05:51	5° Mp 34′20	0°45'25				
max. Earth dist.	-2896 Sep 21 j 01:06	~	19.66756 AU	conjunction	-2888 Oct 26 j 06:42		0°29'09
retrograde	-2895 Jan 06 j 05:23	9° m 50'56		minimum elong	-2888 Oct 26 j 06:42		0°29'09
opposition	-2895 Mar 22 j 05:40	7° m 50'18	0°49'52	max. Earth dist.	-2888 Oct 26 j 17:47	11° ≏ 20'27	20.17831 AU
min. Earth dist.	-2895 Mar 22 j 09:04		17.69714 AU	retrograde	-2887 Feb 10 j 21:43		
direct	-2895 Jun 07 j 13:10	5° ™ 46'36		opposition	-2887 Apr 28 j 12:49	13° ≙ 28'51	0°30'46
				min. Earth dist.	-2887 Apr 28 j 00:10	13° ≏ 30′08	18.21157 AU
conjunction	-2895 Sep 26 j 00:02	10°M)08'51	0°44'11	direct	-2887 Jul 14 j 16:22	11° ≏ 28′11	
minimum elong	-2895 Sep 26 j 00:02	10°M/08'51	0°44'13				
max. Earth dist.	-2895 Sep 25 j 20:44	10° m/08'20	19.72737 AU	conjunction	-2887 Oct 30 j 17:53	15° ≏ 37'47	0°26'17
retrograde	-2894 Jan 11 j 00:55	14° Mp 24'42		minimum elong	-2887 Oct 30 j 17:53	15° ≏ 37'47	0°26'15
opposition	-2894 Mar 27 j 05:52	12° m/24'13	0°48'23	max. Earth dist.	-2887 Oct 31 j 07:25		
min. Earth dist.	•		17.75818 AU	retrograde	-2886 Feb 15 j 10:49		
	-2894 Mar 27 j 07:41	12 1111/27/01		~			
direct	•			opposition	-2886 May 03 i 07:24	17° ≏ 47'08	0°27'30
direct	-2894 Mar 27 j 07:41 -2894 Jun 12 j 12:52			opposition min. Earth dist.	-2886 May 03 j 07:24 -2886 May 02 j 17:47		
	-2894 Jun 12 j 12:52	10° Mp 20'56	0°42'43	min. Earth dist.	-2886 May 02 j 17:47	17° ≏ 48'31	
conjunction	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23	10° m 20'56 14° m 41'43	0°42'43 0°42'44			17° ≏ 48'31	
conjunction minimum elong	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24	10° m 20'56 14° m 41'43 14° m 41'43	0°42'44	min. Earth dist. direct	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25	17° Ω 48'31 15° Ω 46'50	18.27880 AU
conjunction minimum elong max. Earth dist.	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24 -2894 Sep 30 j 16:43	10° m 20'56 14° m 41'43 14° m 41'43 14° m 41'37	0°42'44	min. Earth dist. direct	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25 -2886 Nov 04 j 04:15	17° Ω 48'31 15° Ω 46'50 19° Ω 54'54	18.27880 AU 0°23'17
conjunction minimum elong max. Earth dist. retrograde	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24 -2894 Sep 30 j 16:43 -2893 Jan 15 j 20:27	10° m 20'56 14° m 41'43 14° m 41'43 14° m 41'37 18° m 56'46	0°42'44 19.78935 AU	min. Earth dist. direct conjunction minimum elong	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25 -2886 Nov 04 j 04:15 -2886 Nov 04 j 04:15	17° £ 48'31 15° £ 46'50 19° £ 54'54 19° £ 54'54	18.27880 AU 0°23'17 0°23'16
conjunction minimum elong max. Earth dist. retrograde opposition	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24 -2894 Sep 30 j 16:43 -2893 Jan 15 j 20:27 -2893 Apr 01 j 05:26	10° m 20'56 14° m 41'43 14° m 41'43 14° m 41'37 18° m 56'46 16° m 56'26	0°42'44 19.78935 AU 0°46'36	min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25 -2886 Nov 04 j 04:15 -2886 Nov 04 j 04:15 -2886 Nov 04 j 19:22	17° Ω 48'31 15° Ω 46'50 19° Ω 54'54 19° Ω 54'54 19° Ω 57'11	18.27880 AU 0°23'17 0°23'16
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24 -2894 Sep 30 j 16:43 -2893 Jan 15 j 20:27 -2893 Apr 01 j 05:26 -2893 Apr 01 j 04:46	10° m 20'56 14° m 41'43 14° m 41'43 14° m 41'37 18° m 56'46 16° m 56'26 16° m 56'30	0°42'44 19.78935 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25 -2886 Nov 04 j 04:15 -2886 Nov 04 j 19:22 -2885 Feb 20 j 01:44	17° Ω 48'31 15° Ω 46'50 19° Ω 54'54 19° Ω 54'54 19° Ω 57'11 24° Ω 03'21	18.27880 AU 0°23'17 0°23'16 20.31262 AU
conjunction minimum elong max. Earth dist. retrograde opposition	-2894 Jun 12 j 12:52 -2894 Sep 30 j 17:23 -2894 Sep 30 j 17:24 -2894 Sep 30 j 16:43 -2893 Jan 15 j 20:27 -2893 Apr 01 j 05:26	10° m 20'56 14° m 41'43 14° m 41'43 14° m 41'37 18° m 56'46 16° m 56'26	0°42'44 19.78935 AU 0°46'36	min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2886 May 02 j 17:47 -2886 Jul 19 j 08:25 -2886 Nov 04 j 04:15 -2886 Nov 04 j 04:15 -2886 Nov 04 j 19:22	17° ♠48'31 15° ♠46'50 19° ♠54'54 19° ♠54'54 19° ♠57'11 24° ♠03'21 22° ♠05'16	18.27880 AU 0°23'17 0°23'16 20.31262 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 2

•	ical year style is used: Th		_	` //			
direct	-2885 Jul 24 j 00:41	-		behind sun end	-2879 Dec 02 j 19:27		
	,			max. Earth dist.	-2879 Dec 03 j 14:08		20.75049 AU
conjunction	-2885 Nov 08 j 13:55	24° £ 10'15	0°20'11	desc. node	-2879 Dec 25 j 03:48		
minimum elong	-2885 Nov 08 j 13:55			retrograde	-2878 Mar 21 j 12:59		
max. Earth dist.	-2885 Nov 09 j 07:25			min. Earth dist.	-2878 Jun 06 j 10:04		18.77625 AU
retrograde	-2884 Feb 24 j 13:53			opposition	-2878 Jun 07 j 10:10		0°-1'-39
opposition	-2884 May 11 j 18:14		0°20'35	direct	-2878 Aug 22 j 18:34		
min. Earth dist.	-2884 May 11 j 00:50	26° ≏ 20'04	18.41364 AU		0 3		
direct	-2884 Jul 27 j 15:27			conjunction	-2878 Dec 06 j 19:19	23°M16'02	0°-3'-14
	,			minimum elong	-2878 Dec 06 i 19:20		0°03'19
conjunction	-2884 Nov 11 j 22:58	28° ≏ 23'57	0°17'00	behind sun begin	-2878 Dec 06 j 12:50		
minimum elong	-2884 Nov 11 j 22:58	28° ≏ 23'57		behind sun end	-2878 Dec 07 j 01:50		
max. Earth dist.	-2884 Nov 12 j 17:40		20.44711 AU	max. Earth dist.	-2878 Dec 07 j 20:17		20.80057 AU
	-2884 Dec 09 j 09:05	0°M		retrograde	-2877 Mar 26 j 00:11		
retrograde	-2883 Feb 28 j 04:23	2°M30'59		opposition	-2877 Jun 11 j 22:25		0°-5'-23
opposition	-2883 May 16 j 10:34	0°M31'26	0°16'59	min. Earth dist.	-2877 Jun 10 j 21:07		
min. Earth dist.	-2883 May 15 j 14:30		18.48021 AU	direct	-2877 Aug 27 j 05:28		10.02.13.110
mm. zarm uist.	-2883 May 29 j 13:44	30°R <u>₽</u>	10.10021110		20//1148 2/ 1 00:20	23 11023 20	
direct	-2883 Aug 01 j 05:56	28° £ 32'22		conjunction	-2877 Dec 11 j 01:14	27°M.20'05	0°-6'-33
ancer	-2883 Sep 30 j 01:02	0°M		minimum elong	-2877 Dec 11 j 01:14		0°06'39
	2003 Sep 30 j 01.02	0 110		behind sun begin	-2877 Dec 10 j 19:05		0 0037
conjunction	-2883 Nov 16 j 07:27	2°M36'07	0013144	behind sun end	-2877 Dec 11 j 07:22		
minimum elong	-2883 Nov 16 j 07:27	2°M36'07		max. Earth dist.	-2877 Dec 11 j 07:22 -2877 Dec 12 j 03:41		20 84620 ATT
behind sun begin	-2883 Nov 16 j 07:27	2°M35'35	0 13 41	max. Earth dist.	-2876 Jan 29 j 20:13	27 llG23 37 0° x 7	20.84029 AU
behind sun end	-2883 Nov 16 j 03:40	2°M36'38		retrograde	-2876 Mar 29 j 08:44	1° × ⁷ 23'13	
max. Earth dist.	-2883 Nov 10 j 11:07 -2883 Nov 17 j 04:21		20.51292 AU	renograde	-2876 May 31 j 04:49	30°RM	
	,		20.31292 AU	min Forth dist	, ,		10 06700 ATT
retrograde	-2882 Mar 04 j 15:25	6°M42'29	10 54521 ATT	min. Earth dist.	-2876 Jun 14 j 08:54		18.86789 AU
min. Earth dist.	-2882 May 20 j 05:51		18.54521 AU	opposition	-2876 Jun 15 j 10:06		0°-9'-3
opposition	-2882 May 21 j 02:20	4°M43'03	0-13-19	direct	-2876 Aug 30 j 14:43		
direct	-2882 Aug 05 j 19:23	2°M44'25			-2876 Nov 20 j 01:42	0° ∡ ¹	
	2002 N 20 : 15.27	CO M 4C140	0010124		2076 D 14:06.46	10.700152	09 01 50
conjunction	-2882 Nov 20 j 15:27	6°M46'48	0°10'24	conjunction	-2876 Dec 14 j 06:46	1°×722'53	0°-9'-50
minimum elong	-2882 Nov 20 j 15:27	6°M46'48	0°10'21	minimum elong	-2876 Dec 14 j 06:46	1°×22'53	0°09'56
behind sun begin	-2882 Nov 20 j 10:15	6°M46'03		behind sun begin	-2876 Dec 14 j 01:25	1° ≯ 22'08	
behind sun end	-2882 Nov 20 j 20:40	6°M47'33	20.57(01.41)	behind sun end	-2876 Dec 14 j 12:06	1° 🗷 23'39	20 00012 411
max. Earth dist.	-2882 Nov 21 j 12:59		20.57691 AU	max. Earth dist.	-2876 Dec 15 j 09:02		20.88812 AU
retrograde	-2881 Mar 09 j 05:03	10°M52'33	000012.6	retrograde	-2875 Apr 02 j 18:38	5° х 25'36	00 101 00
opposition	-2881 May 25 j 17:07	8°M53'14		opposition	-2875 Jun 19 j 20:58		0°-12'-39
min. Earth dist.	-2881 May 24 j 18:34		18.60800 AU	min. Earth dist.	-2875 Jun 18 j 18:43		18.90793 AU
direct	-2881 Aug 10 j 08:30	6°M54'58		direct	-2875 Sep 03 j 23:58	1° ∡ 729'41	
	2001 N. 24:22.05	100 M 5(10)	0007102		2075 D 10:12.02	50 70 4120	00 121 2
conjunction	-2881 Nov 24 j 23:05	10°M56'06	0°07'03	conjunction	-2875 Dec 18 j 12:03	5° ₹ 24'32	0°-13'-3
minimum elong	-2881 Nov 24 j 23:05	10°M56'06	0°07'00	minimum elong	-2875 Dec 18 j 12:03	5° × 24'32	0°13'09
behind sun begin	-2881 Nov 24 j 17:01	10°M55'14		behind sun begin	-2875 Dec 18 j 08:05	5° ₹23'58	
behind sun end	-2881 Nov 25 j 05:09	10°M56'59		behind sun end	-2875 Dec 18 j 16:01	5° ∡ 125'05	
max. Earth dist.	-2881 Nov 25 j 22:28		20.63819 AU	max. Earth dist.	-2875 Dec 19 j 15:50		20.92625 AU
	-2880 Mar 05 j 11:54	15°M		retrograde	-2874 Apr 07 j 02:47	9° ∡ 126'52	
retrograde	-2880 Mar 12 j 15:06	15°M01'16		min. Earth dist.	-2874 Jun 23 j 05:02		18.94439 AU
	-2880 Mar 19 j 19:05	15°RM		opposition	-2874 Jun 24 j 07:14	7° ∡ 127'41	0°-16'-11
min. Earth dist.	-2880 May 28 j 08:54		18.66779 AU	direct	-2874 Sep 08 j 08:05	5° ∡ 31'05	
opposition	-2880 May 29 j 07:33	13°ML02'03	0°05'51				
direct	-2880 Aug 13 j 20:15	11°ML04'08		conjunction	-2874 Dec 22 j 17:03	9° ∡ ¹25'09 −	0°-16'-11
	-2880 Nov 27 j 02:38	15°M₁		minimum elong	-2874 Dec 22 j 17:03	9° ∡ ¹25′09	0°16'17
				max. Earth dist.	-2874 Dec 23 j 20:26	9° ∡ ¹29'07	20.96108 AU
conjunction	-2880 Nov 28 j 06:07	15°M04'03	0°03'40	retrograde	-2873 Apr 11 j 11:29	13° ≮ 27′12	
minimum elong	-2880 Nov 28 j 06:07	15°M04'03	0°03'36	opposition	-2873 Jun 28 j 16:48	11° ∡ ¹27'59	0°-19'-36
behind sun begin	-2880 Nov 27 j 23:38	15°ML03'07		min. Earth dist.	-2873 Jun 27 j 13:44		18.97767 AU
behind sun end	-2880 Nov 28 j 12:35	15°M04'59		direct	-2873 Sep 12 j 15:34	9° ∡ ³31'30	
max. Earth dist.	-2880 Nov 29 j 05:43		20.69631 AU				
retrograde	-2879 Mar 17 j 03:43	19°M08'40		conjunction	-2873 Dec 26 j 21:58	13° ∡ ¹24'56	0°-19'-14
opposition	-2879 Jun 02 j 21:15	17°M09'31	0°02'05	minimum elong	-2873 Dec 26 j 21:58	13° ∡ ¹24'56	0°19'21
min. Earth dist.	-2879 Jun 01 j 20:58	17° M 11'57	18.72409 AU	max. Earth dist.	-2873 Dec 28 j 02:43	13° ∡ ¹29'05	20.99265 AU
direct	-2879 Aug 18 j 08:22	15°M11'55		retrograde	-2872 Apr 14 j 19:22	17° ∡ ¹26'43	
				min. Earth dist.	-2872 Jun 30 j 22:59	15° ∡ ³30′13	19.00766 AU
conjunction	-2879 Dec 02 j 12:59	19°M10'42	0°00'13	opposition	-2872 Jul 02 j 02:00	15° ∡ 27'31	0°-22'-55
minimum elong	-2879 Dec 02 j 12:59	19° M 10'42	0°00'10	direct	-2872 Sep 15 j 22:31	13° ∡ ³31'11	
behind sun begin	-2879 Dec 02 j 06:31	19° M 09'46					

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2872 in astronomical counting style is the year 2873 BCE in historical counting style. -2872 Dec 30 i 02:38 17° ₹24'02 0°-22'-11 conjunction -2863 Jan 30 j 21:48 19°る09'03 0°-40'-52 conjunction minimum elong -2872 Dec 30 j 02:37 17° ₹ 24'02 -2863 Jan 30 j 21:48 19°る09'03 0°40'58 minimum elong 0°22'17 -2872 Dec 31 j 06:47 17° ₹28'05 21.02106 AU max. Earth dist. -2863 Jan 31 j 21:20 19°る12'24 21.08676 AU max. Earth dist. -2871 Apr 19 j 03:57 21° ₹25'39 -2863 May 21 j 21:20 23°る11'05 retrograde retrograde -2871 Jul 05 j 07:13 19° ₹29'11 19.03437 AU -2863 Aug 07 j 21:21 21°る11'37 min. Earth dist. opposition 0°-46'-3 -2871 Jul 06 j 10:45 19°**х** 26'27 0°-26'-7 opposition min. Earth dist. -2863 Aug 06 j 23:55 21°る13'47 19.07965 AU -2871 Sep 20 j 04:39 17°**尽**30'15 -2863 Oct 21 j 21:11 19°る15'30 direct direct -2870 Jan 03 j 07:31 21°**又** 22'38 0°-25'-1 -2862 Feb 04 j 04:29 23°る07'19 0°-42'-25 conjunction conjunction -2862 Feb 04 j 04:28 23°る07'19 0°42'30 minimum elong -2870 Jan 03 j 07:31 21°**又** 22'38 0°25'08 minimum elong -2862 Feb 05 j 03:49 23°る10'38 21.07043 AU max. Earth dist. -2870 Jan 04 j 12:44 21° ₹26'50 21.04587 AU max. Earth dist. -2870 Apr 23 j 11:18 25° ₹24'07 -2862 May 26 j 05:01 27°る09'34 retrograde retrograde -2870 Jul 10 j 18:53 23° ₹24'57 0°-29'-12 -2862 Aug 11 j 07:16 25° る12'01 19.06082 AU opposition min. Earth dist. min. Earth dist. -2870 Jul 09 j 15:46 23°**尽** 27'39 19.05729 AU opposition -2862 Aug 12 j 03:34 25°**궁**09'58 0°-47'-39 direct -2870 Sep 24 j 10:32 21°**尽**28'53 direct -2862 Oct 26 j 02:23 23°중13'41 conjunction -2869 Jan 07 j 12:18 25°**х** 20'53 0°-27'-45 conjunction -2861 Feb 08 j 11:18 27°**る**05'48 0°-43'-45 minimum elong -2869 Jan 07 j 12:18 25°**✗** 20'53 0°27'50 minimum elong -2861 Feb 08 j 11:18 27°る05'48 0°43'51 max. Earth dist. -2869 Jan 08 j 16:32 25° ₹724'56 21.06688 AU max. Earth dist. -2861 Feb 09 j 08:28 27°る08'49 21.04943 AU retrograde -2869 Apr 27 j 20:20 29° ₹22'19 -2861 Apr 06 j 06:22 0°**≈** min. Earth dist. -2869 Jul 13 j 23:43 27° ₹25'52 19.07625 AU retrograde -2861 May 30 j 14:04 1°≈08'22 opposition -2869 Jul 15 i 02:51 27° ₹23'10 0°-32'-8 -2861 Jul 25 j 13:34 30°Rる direct -2869 Sep 28 j 15:47 25° ₹27'13 opposition -2861 Aug 16 j 09:52 29°る08'36 0°-49'-1 min. Earth dist. -2861 Aug 15 j 14:46 29°る10'32 19.03771 AU conjunction -2868 Jan 11 j 17:12 29° ₹18'56 0°-30'-20 direct -2861 Oct 30 j 06:56 27°る12'07 -2868 Jan 11 j 17:12 29° ₹18'56 0°30'26 -2860 Jan 24 j 15:14 minimum elong 0°≈≈ max. Earth dist. -2868 Jan 12 j 22:12 29° ₹723'05 21.08354 AU -2868 Jan 23 j 17:11 0°₹ -2860 Feb 12 j 18:30 1°≈04'39 0°-44'-54 conjunction -2868 May 01 j 03:19 3°**る**20'21 -2860 Feb 12 j 18:30 0°44'59 retrograde minimum elong 1°≈≈04'39 -2860 Feb 13 j 15:37 -2868 Jul 17 j 08:05 1°る23'52 19.09056 AU max. Earth dist. min. Earth dist. 1°≈07'39 21.02425 AU -2868 Jul 18 j 10:32 1°**궁**21'14 0°-34'-54 -2860 Jun 02 j 22:16 opposition retrograde 5°≈07'34 3°**≈**07'40 0°-50'-10 -2868 Aug 24 j 20:57 30°R ✓ -2860 Aug 19 j 16:04 opposition -2868 Oct 01 j 21:07 29° ₹25'22 direct min. Earth dist. -2860 Aug 18 j 21:56 3°≈09'31 19.01058 AU -2868 Nov 07 j 18:32 0°る -2860 Nov 02 j 11:39 1°≈10'59 direct -2859 Feb 16 j 02:13 -2867 Jan 14 j 22:21 3°る16'54 0°-32'-46 5°≈04'02 0°-45'-49 conjunction conjunction -2867 Jan 14 j 22:21 -2859 Feb 16 j 02:13 minimum elong 3°る16'54 0°32'53 minimum elong 5°≈04'02 0°45'53 max. Earth dist. -2867 Jan 16 j 01:57 3°る20'50 21.09549 AU max. Earth dist. -2859 Feb 16 j 21:04 5°≈06'43 20.99541 AU retrograde -2867 May 05 j 12:37 7°る18'22 retrograde -2859 Jun 07 j 07:47 9°≈07'23 opposition -2867 Jul 22 j 17:52 5°る19'14 0°-37'-31 opposition -2859 Aug 23 j 22:13 7°≈07'21 0°-51'-4 min. Earth dist. -2867 Jul 21 j 16:01 5°る21'49 19.09997 AU min. Earth dist. -2859 Aug 23 j 05:28 7°≈09'03 18.98003 AU -2867 Oct 06 j 01:46 3°る23'25 direct -2859 Nov 06 j 16:26 5°≈10'27 direct -2866 Jan 19 j 03:55 7°る14'52 0°-35'-4 -2858 Feb 20 j 10:37 9°≈04'08 0°-46'-31 conjunction conjunction -2866 Jan 19 j 03:55 7°る14'52 0°35'09 -2858 Feb 20 j 10:37 9°≈04'08 0°46'36 minimum elong minimum elong -2866 Jan 20 i 07:41 7°る18'49 21.10205 AU -2858 Feb 21 i 05:12 max. Earth dist. max. Earth dist. 9°≈06'47 20.96312 AU -2866 May 09 j 19:51 11°る16'24 retrograde retrograde -2858 Jun 11 j 16:58 13°≈07'56 -2866 Jul 26 i 00:14 9°る19'44 19.10365 AU min. Earth dist. opposition -2858 Aug 28 i 04:28 11°≈07'48 0°-51'-43 opposition -2866 Jul 27 i 01:01 9°る17'15 0°-39'-57 min. Earth dist. -2858 Aug 27 i 12:43 11°≈09'25 18.94606 AU direct -2866 Oct 10 j 07:01 7°**る**21'26 direct -2858 Nov 10 j 21:07 9°≈10'43 -2865 Jan 23 j 09:33 11°る12'51 0°-37'-11 -2857 Feb 24 i 19:16 13°≈05'06 0°-46'-59 conjunction conjunction -2865 Jan 23 j 09:33 11°る12'51 0°37'17 -2857 Feb 24 j 19:16 13°≈05'06 0°47'04 minimum elong minimum elong -2865 Jan 24 j 11:21 11°る16'32 21.10285 AU -2857 Feb 25 j 11:26 13°≈07'25 20.92766 AU max. Earth dist. max. Earth dist. -2865 May 14 j 04:49 15°る14'32 retrograde -2857 Mar 31 j 16:07 15°≈ min. Earth dist. -2865 Jul 30 j 08:11 13°る17'41 19.10149 AU retrograde -2857 Jun 16 j 03:05 17°≈09'28 opposition -2865 Jul 31 j 07:59 13°쥥15'18 0°-42'-11 opposition -2857 Sep 01 j 10:57 15°≈09'14 0°-52'-8 direct -2865 Oct 14 j 11:21 11°る19'26 min. Earth dist. -2857 Aug 31 j 20:46 15°≈10'42 18.90903 AU -2857 Sep 05 j 05:03 15°R≈ -2864 Jan 27 j 15:37 15° ₹ 10'55 0°-39'-7 -2857 Nov 15 j 02:01 13°≈11'57 conjunction direct -2864 Jan 27 j 15:37 15°정10'55 0°39'13 -2856 Jan 21 j 04:52 15°≈ minimum elong max. Earth dist. -2864 Jan 28 j 17:18 15°중14'34 21.09766 AU retrograde -2864 May 17 j 12:25 19°る12'44 conjunction -2856 Feb 29 j 04:52 17°≈07'10 0°-47'-14 opposition -2864 Aug 03 j 14:45 17°る13'25 0°-44'-14 minimum elong -2856 Feb 29 i 04:53 17°≈07'10 0°47'19 min. Earth dist. -2864 Aug 02 j 16:06 17°る15'42 19.09331 AU max. Earth dist. -2856 Feb 29 j 20:39 17°≈09'25 20.88907 AU direct -2864 Oct 17 j 16:48 15°**♂**17'27 retrograde -2856 Jun 19 j 13:47 21°≈12'07

opposition

-2856 Sep 04 j 17:32 19°≈11'49 0°-52'-17

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 4

Actoring a	•			•		AG 7-Dez-2017 1		age 4
Compunetion 2855 Mar 9 1504 21941927 0"-47-15 0"-1507-1508 2875 Mar 9 1504 21941927 0"-47-15 0"-1507-1508 2875 Mar 9 1504 27941927 0"-47-15 0"-1507-1508 2875 Mar 9 1504 27941927 0"-47-15 0"-1507-1508 0"-47-15 0"-47	Attention, astronom							
Conjunction 2855 Mar 94 1504 21%=10727 074715 minimum elong max. Earth dist. 2858 Mar 94 1504 21%=1073 074715 minimum elong proposition 2858 Mar 94 1504 21%=1073 074714	min. Earth dist.			18.86878 AU	min. Earth dist.	·		18.41926 AU
minimum clong minimum clon	direct	-2856 Nov 18 j 07:40	17° ≈ 14'20		direct	-2848 Dec 20 j 23:53	20°) 22′40	
minimum elong								
max. Earth dist	·	-		0°-47'-15	-			0°-38'-40
retrograde 2855 Nm 24 100-41 25 mal 20 00-24 11 min 12 min 14 min 2855 Sep 08 13.29 27 mal 20 18 82.53 10 min 12 min 14 min 2855 Sep 08 13.29 27 mal 20 18 82.53 10 min 12 min 14 min 2855 Sep 08 13.29 27 mal 20 18 82.53 10 min 12 min 14 min 2855 Sep 08 13.29 27 mal 20 18 82.53 10 min 14 min	minimum elong	-2855 Mar 04 j 15:04	21° ≈ 10′27	0°47'19	minimum elong			
Deposition 2855 Sep 09 09.29 23*elf-540 0*-29-1 0*-29-2 0*-2	max. Earth dist.	-2855 Mar 05 j 04:04	21° ≈ 12′18	20.84732 AU	max. Earth dist.	-2847 Apr 08 j 01:19	24°) €27'42	20.38551 AU
min. Earth dist. 2845 Sep. 08 [1329] 328*81049 18.82531 AU min. Earth dist. 2847 Dec 2 [10:3] 427.741 32.851 AU cenjunction direct 22845 Mar 09 [0:214] 228*es1786 0°470 conjunction 2846 Apr 12 [2:331] 28*844481 0°30-33 minimum clong 22845 Mar 09 [0:214] 228*es1806 0°4700 minimum clong 2846 Apr 12 [2:331] 28*844481 0°30-33 minimum clong 22845 Mar 09 [1:27] 228*es1806 0°4700 min. Earth dist. 2846 Apr 12 [2:331] 28*84481 0°30-33 min. Earth dist. 22845 Sep 13 [1:0720 278*ex915 18.77810 AU min. Earth dist. 2846 Apr 12 [1:0720] 28*46 Apr 12 [1:0720] 28*46 Apr 12 [1:0720] 28*46 Apr 12 [1:0720] 28*9 Apr 1	retrograde	-2855 Jun 24 j 00:41	25° ≈ 16′03		retrograde	-2847 Jul 28 j 06:43	28° ∺ 39'53	
direct	opposition	-2855 Sep 09 j 00:29	23° ≈ 15'40	0°-52'-11	opposition	-2847 Oct 11 j 21:16	26°) 38′18	0°-41'-43
Conjunction	min. Earth dist.	-2855 Sep 08 j 13:29	23° ≈ 16'49	18.82531 AU	min. Earth dist.	-2847 Oct 12 j 01:46	26°) ₹37'49	18.35138 AU
minimum clong	direct	-2855 Nov 22 j 12:35	21° ≈ 17'58		direct	-2847 Dec 25 j 10:31	24°) 37′41	
minimum clong								
max Farth dist	conjunction	-2854 Mar 09 j 02:14	25° ≈ 15′06	0°-47'-2	conjunction	-2846 Apr 12 j 23:31	28°) 44′51	0°-36'-33
corpuration 2384 Am 28 12.54 29%-2172 corpuration 2385 Am 23 12.92 27%-2175 18.7810 AU orgonistion 2385 Am 23 14.02 29%-2270 orgonistion 2385 Am 23 22.59 29%-2272 0.75302 AU 2385 Am 23 22.59 29.75302 AU 2385 Am 23 22.59 23.50 Am 23 24.59 Am 24.59 Am 24.50 Am	minimum elong	-2854 Mar 09 j 02:14	25° ≈ 15′06	0°47'06	minimum elong	-2846 Apr 12 j 23:31	28°) 44′51	0°36'34
opposition im. Earth dist. 2845 Sep 13 j0735 (2202 27%-8208) 27%-8208 (37)-148 (38)-148 (max. Earth dist.	-2854 Mar 09 j 14:27	25° ≈ 16′50	20.80202 AU	max. Earth dist.	-2846 Apr 12 j 17:51	28°) (44′02	20.31726 AU
mine Earth dist. 2854 Sep. 12 j 22.02 27% 2715 St. 8.77810 AU deposition 2.2846 Oct 1 [6] 07.52 0°°°5233 0°-39°-15 direct -2854 Nov 26 j 1946 25% 287300 min. Earth dist. -2846 Nov 07 j 2002 30°%4 18.28293 AU conjunction -2853 Mar 13 j 14:02 29% 22218 20°8-22111 0°-46°-34 direct -2846 Nov 07 j 2002 30°%4 -2853 Mar 13 j 14:02 29% 22228 20°7-3902 AU -2845 Reb 29 j 22.45 28°K 42°P1 28°K	retrograde	-2854 Jun 28 j 12:54	29° ≈ 21'22			-2846 May 04 j 15:02	0 ° Υ	
direct -2854 Nov 26 j 19-46 25°8-23'00 min. Earth dist. -2346 Nov 1 (5 j 12.1) 0°°°4'49 18.28293 AU conjunction -2853 Mar 13 j 14-02 29°8-21'11 0°4-6'-34 direct -2846 Nov 07 j 2002 30°%4 aminimum clong -2853 Mar 13 j 14-02 29°8-22'11 0°4-6'-34 direct -2845 Peb 18 j 21:18 0°° retogande -2853 Mar 23 j 20-58 0°8-22'22 20°3-302 AU -2853 Mar 23 j 20°8-22'8 0°4-21'1 opposition -2853 Sep 17 j 15:14 1°42'73'9 0°-51:10 minimum clong -2854 Nar 17 j 17-40 3°°030 0°-34'12 opposition -2853 Dec 01 j 01:32 29°8-29/26 minimum clong -2854 Nar 07 j 00:01 3°°01'42 0°-30'-33 direct -2852 Mar 17 j 02-45 3°H28'45 0°-45'-51 minimum clong -2854 Nar 17 j 02-45 3°H28'45 0°-45'-51 conjunction -2844 Apr 21 j 12-49 7°°0'22'-56 0°-31'04 acconjunction -2852 Mar 17 j 02-45 3°H28'45 0°-45'-51 conjunction -2844 Apr 21 j 12-49 7°°0'22'56 0°-31'04	opposition	-2854 Sep 13 j 07:35	27° ≈ 20′56	0°-51'-48	retrograde	-2846 Aug 01 j 21:53	2° Y 57'08	
Conjunction -2855 Mar 13 14-02 29*≈21*11 0°46/34 direct -2846 New 07 10°02 39*8 4*12*1 10°46/38 conjunction -2855 Mar 13 14-02 29*≈21*28 20*≈22*1 0°46/38 conjunction -2855 Mar 13 12-59 29*≈22*28 20*≈22*28	min. Earth dist.	-2854 Sep 12 j 22:02	27° ≈ 21'55	18.77810 AU	opposition	-2846 Oct 16 j 07:52	0° Υ 55'23	0°-39'-15
conjunction 2853 Mar 13] 14:02 29%e21711 0*46/34 direct 2246 Feb 18 j 21:18 0*0*** o*0*** o*	direct	-2854 Nov 26 j 19:46	25° ≈ 23′00		min. Earth dist.	-2846 Oct 16 j 13:12	0° Υ 54'49	18.28293 AU
minimum elong and search dist. 2883 Mar 13 j 14.02 297≈82171 0746/38 conjunction 2845 Feb 18 j 21:18 0747 crtorgade 2845 Mar 13 j 12:59 297≈82228 20.75302 AU 2853 Mar 13 j 12:59 297≈82228 20.75302 AU 2853 Mar 13 j 12:59 297≈82228 20.75302 AU 2853 Mar 13 j 12:59 297≈8228 20.75302 AU 2853 Mar 13 j 12:59 297≈8229 conjunction 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740300 07-34-12 minimum elong 2845 Apr 17 j 10:40 3740200 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 17 j 10:40 374020 07-45-51 minimum elong 2845 Apr 26 j 10:40 374020 07-33-33 07-33-34 374020 07-34-34 3						-2846 Nov 07 j 20:02	30° ₹ ₩	
max. Earth dist.	conjunction	-2853 Mar 13 j 14:02	29° ≈ 21'11	0°-46'-34	direct	-2846 Dec 29 j 22:45	28°) 54′21	
conjunction -2853 Mar 24 j 20/58 0°+4 minimum elong -2845 Apr 17 j 17-40 3°\000000 0°-34*12	minimum elong	-2853 Mar 13 j 14:02	29° ≈ 21'11	0°46'38		-2845 Feb 18 j 21:18	0 ° $\mathbf{\Upsilon}$	
retrograde opposition	max. Earth dist.	-2853 Mar 13 j 22:59	29° ≈ 22'28	20.75302 AU				
Poposition 2.853 Sep 17 j 15.14 1°H27'95 0°-51'-10 max. Earth dist. -2.845 Aug 06 j 12:39 3°M'01'42 0.24882 AU min. Earth dist. -2.845 Aug 06 j 12:39 3°M'01'42 0.24882 AU min. Earth dist. -2.845 Aug 06 j 12:39 3°M'01'42 0.24882 AU min. Earth dist. -2.845 Out 2 j 19:12 5°M'14'12 0°-36'-33 direct -2.845 Out 0 j 19:13 5°M'14'12 0°-36'-33 min. Earth dist. -2.845 Out 2 j 19:15 5°M'14'12 0°-36'-33 min. Earth dist. -2.845 Jan 0 4 j 12:07 0°-45'-51 minimum elong minimum elong -2.852 Mar 17 j 10:245 3°H28'45 0°45'-54 minimum elong minimum elong -2.852 Mar 17 j 10:245 3°H28'45 0°45'-54 minimum elong minimum elong -2.852 Mar 17 j 10:245 3°H28'45 0°45'-54 minimum elong -2.852 Mar 17 j 10:245 3°H28'-35 0°45'-54 minimum elong -2.852 Mar 17 j 10:245 3°H28'-35 0°45'-54 minimum elong -2.852 Mar 17 j 10:245 3°H28'-35 0°-50'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-213 0°-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-213 0°-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 0°-36'-33 or-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 0°-36'-33 or-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 0°-36'-33 or-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 0°-36'-33 or-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 or-30'-33 or-30'-15 opposition -2.844 Aug 10 j 10:31 3°M'01'-214 or-30'-33 or-30'-21 or-30'-33 or-30'-21 or-30'-33 or-30'-21 or-30'-33 or-30'-21 or-30'-34 o		-2853 Mar 24 j 20:58	0°) €		conjunction	-2845 Apr 17 j 17:40	3° Y 03'00	0°-34'-12
min. Earth dist. 2,853 Sep. 17 j.08.03 19 ± 2,874 18,7217 A.U poposition	retrograde	-2853 Jul 03 j 00:10	3°) €28'11		minimum elong	-2845 Apr 17 j 17:40	3° Y 03'00	0°34'12
direct	opposition	-2853 Sep 17 j 15:14	1°) €27'39	0°-51'-10	max. Earth dist.	-2845 Apr 17 j 09:01	3° Ƴ 01'44	20.24882 AU
direct	min. Earth dist.	-2853 Sep 17 j 08:03	1° ¥ 28'24	18.72717 AU	retrograde	-2845 Aug 06 j 12:39	7° Υ 16'06	
Conjunction -2852 Mar 17 1023 29*84276 min. Earth dist. -2844 Apr 21 1249 7*\text{72:55} 0*-31*-39 max. Earth dist. -2852 Mar 17 10245 3*\text{**\frac{2}{2}}\text{\$2}\$ 0*-45*-51 minimum clong -2852 Mar 17 10245 3*\text{**\frac{2}{2}}\text{\$2}\$ 0*-45*-51 minimum clong -2844 Apr 21 1249 7*\text{\$2}\text{\$25}\$ 0*-31*-39 max. Earth dist. -2852 Mar 17 103-35 3*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$45*\frac{2}{2}}\text{\$4\$} 0*\text{\$28*\frac{2}{2}}\text{\$4\$} 0*\text{\$45*\frac{2}{2}}\text{\$28*\frac{2}{2}}\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$45*\frac{2}{2}}\text{\$28*\frac{2}{2}}\text{\$3}\$ 0*\text{\$45*\frac{2}{2}}\text{\$4\$} 0*\text{\$45*\frac{2}{2}}\text{\$45*\frac{2}{2}}\text{\$15*\frac{2}{2}}\text{\$28*\frac{2}{2}}\text{\$28*\frac{2}{2}\text{\$45*\frac{2}{2}}\text{\$15*\frac{2}{2}\text{\$28*\frac{2}{2}\text{\$28*\frac{2}{2}\text{\$45*\frac{2}{2}\text{\$45*\frac{2}{2}\text{\$28*\frac{2}{2}\text{\$45*\frac{2}{2}\$		-2853 Oct 27 j 05:49	30°R≈		-	-2845 Oct 20 j 19:12	5° Ƴ 14'12	0°-36'-33
conjunction minimum elong min	direct	-2853 Dec 01 j 01:32	29° ≈ 29'26			-2845 Oct 21 j 02:58	5° Ƴ 13'23	18.21471 AU
conjunction minimum elong 2852 Mar 17 j 02.45 3° ±2845 0° 45' 51 minimum elong 2852 Mar 17 j 02.45 3° ±2845 0° 45' 51 minimum elong 2844 Apr 21 j 12:49 7° 22' 56 0° 31' 40 max. Earth dist. 2852 Mar 17 j 10.35 3° ±28' 52 20' 7° ±36'		-	0° ∀		direct	-	3° Y 12'45	
minimum elong max. Earth dist. 2843 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V22'56 0°31'40 max. Earth dist. 2844 Apr 21 j 12:49 7°°V23'58 18.14701 AU direct 2843 Apr 26 j 15:34 9°°V33'58 18.14701 AU direct 2843 Apr 26 j 15:34 9°°V33'58 18.14701 AU direct 2843 Apr 26 j 16:49 7°°V24'57 minimum elong 2843 Apr 26 j 16:49 11°°V4447 0°28'54 max. Earth dist. 2841 Mar 21 j 10:10 8 11°°V4447 0°28'54 max. Earth dist. 2841 Mar 21 j 10:08 11°°V4451 0°78'54 11°°V4447 0°28'54 max. Earth dist. 2843 Apr 25 j 16:32 9°°V45'25 0°-49'-4 minimum elong 2843 Apr 26 j 16:49 11°°V4447 0°28'54 11°°V4447		,				,		
minimum elong -2852 Mar 17 j 02.45 3°H2485 0°45'54 minimum elong -2844 Apr 21 j 12:49 7°P′22'56 0°3140 max. Earth dist. -2852 Mar 17 j 10:35 3°H2953 20.70005 AU max. Earth dist. -2844 Apr 21 j 03:13 7°P′21'31 20.18086 AU retrograde opposition -2852 Sep 20 j 23:13 5°H3624 18.67208 AU min. Earth dist. -2844 Oct 24 j 07:07 9°P′3452 0°-33'-37 conjunction direct -2852 Dec 04 j 10:15 5°H3624 18.67208 AU min. Earth dist. -2844 Oct 24 j 07:07 9°P′3452 0°-33'-37 minimum elong direct -2851 Dec 04 j 10:15 5°H3624 18.67208 AU minimum elong -2844 Oct 24 j 07:07 9°P′3452 0°-33'-37 minimum elong direct -2851 Mar 21 j 16:16 7°H3747 0°-44'-54 minimum elong 2843 Apr 26 j 08:48 11°P′4447 0°-28'-55 max. Earth dist. -2851 Mar 21 j 20:29 7°H38'24 20.64307 AU minimum elong 2843 Apr 26 j 08:48 11°P′4447 0°-28'-55 max. Earth dist. -2851 Mar 21 j 20:29 7°H38'24 0°-43'-42 opposition<	conjunction	-2852 Mar 17 j 02:45	3°) €28'45	0°-45'-51	conjunction	-2844 Apr 21 j 12:49	7° Y 22'56	0°-31'-39
max. Earth dist. -2852 Mar 17 j 10:35 3° μ2953 20.70005 AU max. Earth dist. -2844 Apr 2 j 0.513 3° γ° γ313 20.18086 AU opposition -2852 Sep 20 j 23:13 5° β4628 ° γ8.3628 ° γ8.3737 ° γ8.3737 ° γ8.3737 ° γ8.3737 ° γ8.3737 ° γ8.3717		-	3°) €28'45	0°45'54	minimum elong		7° Y 22'56	0°31'40
retrograde		-	3°) €29'53	20.70005 AU	· ·			20.18086 AU
opposition -2852 Sep 20 j 23:13 5° +38'49 0°-50°-15 opposition -2844 Oct 24 j 07:07 9° γ³3'52 0°-33'-37 min. Earth dist. -2852 Dec 04 j 10:15 3° +33'17 direct -2843 Jan 07 j 00:20 7° γ³3'382 18.14701 AU conjunction -2851 Mar 21 j 16:16 7° +37'47 0°-44'-54 conjunction -2843 Apr 26 j 08:48 11° γ*44'47 0°-28'-55 max. Earth dist. -2851 Mar 21 j 10:16 7° +37'47 0°-44'-54 conjunction -2843 Apr 26 j 08:48 11° γ*44'74 0°-28'-55 max. Earth dist. -2851 Mar 21 j 10:09 7° +33'*4 0°-43'-40 conjunction -2843 Apr 26 j 08:48 11° γ*44'74 0°-28'-55 max. Earth dist. -2851 Mar 21 j 10:09 11° j 10:08 11° +46'15 max. Earth dist. -2843 Apr 26 j 08:48 11° γ*44'74 0°-28'54 retrograde -2851 Jul 11 j 01:08 11° +46'15 0°-49'-4 opposition -2843 Apr 26 j 06:41 11° γ*6'51'8 exposition -2850 Mar 26 j 06:41 11° +48'15 0°-49'-4 opposition -2840 Mar 30 j 10:45 16° γ*0'8'1 0°		•						
min. Earth dist. direct -2852 Sep 20 j 17:34 5°\mathref{3}6'24 18.67208 AU min. Earth dist. direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 7°\mathref{3}3'02 18.14701 AU direct -2843 Jan 07 j 00:20 81 18.74447 0°\mathref{2}854 Au au direct -2843 Jan 07 j 00:20 20 113°\mathref{4}2'55 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:20 20 113°\mathref{4}2'58 AU min. Earth dist2843 Jan 07 j 00:40 40 20.043 AU min. Earth dist2843 Jan 07 j 00:40 40 20.043 AU min. Earth dist2840 Jan 19 j 0:40 40 20.0473 AU min. Earth dist2840 Jan 19 j 0:40 40 20.0473 AU min. Earth dist2840 Jan 19 j 16:30 20°\mathref{4}2'00 20.0473 AU min. Earth dist2840 Jan 19 j 16:30 20°\mathref{4}2'00 20.0473 AU min. Earth dist2840 Jan 19 j 16:30 20°\mathref{4}2'00 20.0473 AU min. Earth dist2841 Jan 16 j 0:500 16°\mathref{4}0'00 20.0473 AU min. Earth dist2841 Jan 16 j 0:500 16°\mathref{4}0'00 20.0473 AU min. Earth dist2841 Jan 16 j 0:500 16°\mathref{4}0'00 20.51881 AU min. Earth dist2841 Jan 16 j 0:500 16°\mathref{4}0'00 20.51881 AU min. Earth dist2841 Jan 16 j 0:30:24 20°\mathref{4}3'40 0°\mathref{2}2'5	•	3	5° ¥ 35'49	0°-50'-15	-			0°-33'-37
direct -2852 Dec 04 j 10:15 3° ¥37'17 direct -2843 Jan 07 j 00:20 7° ♥33'02 conjunction minimum elong minimum elong minimum elong minimum elong minimum elong -2851 Mar 21 j 16:16 7° ¥37'47 0°-44'-54 conjunction -2843 Apr 26 j 08:48 11° № 44'47 0°-28'-55 max. Earth dist. -2851 Mar 21 j 20:29 7° ¥38'24 20.64307 AU max. Earth dist. -2843 Apr 26 j 08:48 11° № 42'58 20.11356 AU retrograde opposition -2851 Sep 25 j 07:34 9° ¥45'25 0°-49'-4 opposition -2843 Oct 29 j 06:46 13° № 56'19 18.08024 AU direct -2851 Dec 08 j 17:52 7° ¥46'31 o°-43'-42 opposition -2842 May 01 j 05:45 16° № 084 11° № 55'18 conjunction -2850 Mar 26 j 06:41 11° ¥48'15 0°-43'-42 conjunction -2842 May 01 j 05:45 16° № 0841 0°-25'-58 mini. Earth dist. -2850 Mar 26 j 06:41 11° ¥48'15 0°-43'-42 conjunction -2842 May 01 j 05:45 16° № 0841 0°-25'-58 max. Earth dist. -2850 Mar 26 j 06:41 11° ¥48'15 0°-43'-42 conjunction					* *	•		
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max. Earth dist. -2851 Mar 21 j 20:29 7° ± 38° 24 20.64307 AU max. Earth dist. -2843 Agr 25 j 20:25 11° ± 42′58 20.11356 AU retrograde -2851 Jul 11 j 0:08 11° ± 46′15 retrograde -2843 Aug 14 j 21:43 18° ± 5934 0° -30′-29 min. Earth dist. -2851 Sep 25 j 0:34 9° ± 45′25 0° -49′-4 opposition -2843 Oct 28 j 19:47 13° ± 57′50³ 0° -30′-29 min. Earth dist. -2851 Dec 08 j 17:52 7° ± 46′31 min. Earth dist. -2842 Dan 11 j 13:18 11° ± 55′18 18.08024 AU conjunction -2850 Mar 26 j 06:41 11° ± 48′15 0° -43′-42 conjunction -2842 May 01 j 05:45 16° ± 0′08′41 0° -25′-58 max. Earth dist. -2850 Mar 26 j 06:41 11° ± 48′15 0° 43′-42 conjunction -2842 May 01 j 05:45 16° ± 0′08′41 0° 25′-58 max. Earth dist. -2850 Mar 26 j 06:41 11° ± 48′15 0° 43′+44 minimum elong -2842 May 01 j 05:45 16° ± 0′08′41 0° 25′-58 max. Earth dist. -2850 Mar 26 j 06:41 11° ± 48′15 0° 43′44 minimum elong 2842 May 01 j 05:		3			•			
retrograde		-	7° ₩ 38'24	20.64307 AU	· ·			20.11356 AU
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min. Earth dist. direct	•	3		0°-49'-4				0°-30'-29
direct								
conjunction -2850 Mar 26 j 06:41 l1° χ48°15 l0°-43°-42 minimum elong conjunction -2842 May 01 j 05:45 l6° γ08°41 l0°-25′-58 l6° γ08°41 l0°-25′-58 l6° γ08°41 l0°-25′-58 l0°-27′-58 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0°-27′-27′-28 l0								
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minimum elong -2850 Mar 26 j 06:41 11° ¥48'15 0°43'44 minimum elong -2842 May 01 j 05:45 16° ¥08'41 0°25'58 max. Earth dist. -2850 Mar 26 j 09:41 11° ¥48'41 20.58245 AU max. Earth dist. -2842 Apr 30 j 16:15 16° ¥06'40 20.04734 AU retrograde -2850 Mar 26 j 09:41 15° j 14:34 15° ¥57'26 retrograde -2842 Aug 19 j 16:39 20° ¥24'19 0°-27'-8 opposition -2850 Sep 29 j 16:18 13° ¥56'27 0°-47'-38 opposition -2842 Nov 02 j 09:10 18° ¥22'12 0°-27'-8 min. Earth dist. -2850 Sep 29 j 14:38 13° ¥56'97 18.55090 AU min. Earth dist. -2842 Nov 02 j 09:10 18° ¥20'57 18.01447 AU direct -2850 Dec 13 j 03:41 11° ¥57'09 direct -2841 Jan 16 j 05:00 16° ¥09'19 0°-42'-15 min. Earth dist. -2841 May 05 j 01:25 0°° ₹32'17 19.98203 AU conjunction -2849 Mar 30 j 21:30 16° ¥00'09 0°-42'-15 conjunction -2841 M	conjunction	-2850 Mar 26 i 06:41	11° ¥ 48'15	0°-43'-42	conjunction	-2842 May 01 i 05:45	16° Ƴ 08'41	0°-25'-58
max. Earth dist.		-			-			
retrograde		J			Č	, ,		
opposition -2850 Sep 29 j 16:18 l 3°\+56'27 l 0°-47'-38 min. Earth dist. opposition -2842 Nov 02 j 09:10 l 18°\+22'12 l 0°-27'-8 l 8.01447 AU direct -2850 Sep 29 j 14:38 l 3°\+56'37 l 8.55090 AU min. Earth dist. -2842 Nov 02 j 09:10 l 18°\+22'12 l 0°-27'-8 l 8.01447 AU direct -2850 Dec 13 j 03:41 l 1°\+57'09 l 8.01447 AU direct -2841 Jan 16 j 05:00 l 6°\+019'40 l 8°\+020'5 l 1:25 l 20°\+732'17 l 9.98203 AU l 9.98203 A		-						
min. Earth dist.	-	•		0°-47'-38	-			0°-27'-8
direct -2850 Dec 13 j 03:41 10° €57'09 direct -2841 Jan 16 j 05:00 16° № 19'40 max. Earth dist2841 May 05 j 11:25 20° № 32'17 19.98203 AU conjunction -2849 Mar 30 j 21:30 16° €00'09 0° 42'-15 minimum elong -2849 Mar 30 j 21:30 16° €00'09 0° 42'18 conjunction -2841 May 06 j 03:24 20° № 34'40 0° -22'-52 max. Earth dist2849 Mar 30 j 21:06 16° €00'06 20.51881 AU minimum elong -2841 May 06 j 03:24 20° № 34'40 0° 22'51 retrograde -2849 Jul 20 j 03:09 20° €10'06 retrograde -2841 May 06 j 03:24 20° № 34'40 0° 22'51 retrograde -2849 Oct 04 j 01:34 18° €08'54 0° -45'-55 opposition -2841 Nov 06 j 23:29 22° № 49'02 0° -23'-35 min. Earth dist2849 Oct 04 j 02:26 18° €08'49 18.48605 AU min. Earth dist2840 Jul 20 j 19:36 20° № 40'04 direct -2840 Jul 20 j 19:36 20° № 40'04 direct -2840 Jul 20 j 19:36 20° № 40'04 max. Earth dist2840 May 09 j 08:38 25° № 00'10 19.91767 AU conjunction -2848 Apr 03 j 13:26 20° № 13'31 0° -40'-35 minimum elong -2848 Apr 03 j 12:00 20° № 13'19 20.45294 AU minimum elong -2840 May 10 j 02:13 25° № 02'48 0° -19'-35 max. Earth dist2848 Jul 23 j 17:06 24° № 24'13 retrograde -2840 Aug 28 j 06:34 29° № 0° 19'33						·		
max. Earth dist2841 May 05 j 11:25 20°Y32'17 19.98203 AU conjunction -2849 Mar 30 j 21:30 16° \(\) \(\				10.000,0110		,		10.01117110
conjunction -2849 Mar 30 j 21:30 16° ★00'09 0°-42'-15 minimum elong max. Earth dist2849 Mar 30 j 21:30 16° ★00'09 0°42'18 conjunction -2841 May 06 j 03:24 20° ♥ 34'40 0°-22'-52 max. Earth dist2849 Mar 30 j 21:06 16° ★00'06 20.51881 AU minimum elong -2841 May 06 j 03:24 20° ♥ 34'40 0°-22'-51 retrograde -2849 Jul 20 j 03:09 20° ★10'06 retrograde -2841 Aug 24 j 10:07 24° ♥ 51'10 opposition -2849 Oct 04 j 01:34 18° ★08'54 0°-45'-55 min. Earth dist2849 Oct 04 j 02:26 18° ★08'49 18.48605 AU direct -2849 Dec 17 j 12:57 16° ★09'10 direct -2849 Apr 03 j 13:26 20° ★13'31 0°-40'-35 minimum elong -2848 Apr 03 j 13:26 20° ★13'31 0°-40'-35 max. Earth dist2849 Apr 03 j 13:26 20° ★13'31 0°-40'-35 max. Earth dist2848 Apr 03 j 12:00 20° ★13'19 20.45294 AU retrograde -2840 Aug 28 j 06:34 29° ♥ 20'07 minimum elong -2840 Aug 28 j 06:34 29° ♥ 20'07 retrograde -2840 Aug 28 j 06:34 29° ♥ 20'07		2000 200 15) 05.11	11 /(0, 0)			-		19 98203 AU
minimum elong	conjunction	-2849 Mar 30 i 21:30	16° ₩ 00'09	0°-42'-15	max. Bartii dist.	2011 May 05 j 11.25	20 32 17	19.90203710
max. Earth dist. -2849 Mar 30 j 21:06 16° ±00′06 20.51881 AU minimum elong -2841 May 06 j 03:24 20° ₹34′40 0°22′51 retrograde -2849 Jul 20 j 03:09 20° ±10′06 retrograde -2841 Aug 24 j 10:07 24° ₹51′10 20° ±10′06 0°22′51 opposition -2849 Oct 04 j 01:34 18° ±08′54 0°-45′-55 opposition -2841 Nov 06 j 23:29 22° ₹49′02 0°-23′-35 min. Earth dist. -2849 Oct 04 j 02:26 18° ±08′49 18.48605 AU min. Earth dist. -2841 Nov 07 j 13:45 22° ₹47′29 17.94969 AU direct -2849 Dec 17 j 12:57 16° ±09′10 direct -2840 May 09 j 08:38 25° ₹00′10 19.91767 AU conjunction -2848 Apr 03 j 13:26 20° ±13′31 0°-40′-35 conjunction -2840 May 10 j 02:13 25° ₹02′48 0°-19′-35 max. Earth dist. -2848 Apr 03 j 12:00 20° ±13′31 0°40′37 conjunction -2840 May 10 j 02:13 25° ₹02′48 0°-19′-35 max. Earth dist. -2848 Apr 03 j 12:00 20° ±13′13 0°40′37 minimum elong -2840 May 10 j 02:13 25°	-	-			conjunction	-2841 May 06 i 03:24	20° ℃ 34'40	0°-22'-52
retrograde		-						
opposition		•		20.01001710	_			0 -201
min. Earth dist.	•	•		0°-45'-55	-			0°-23'-35
direct		•						
max. Earth dist2840 May 09 j 08:38 25° № 11 19.91767 AU conjunction -2848 Apr 03 j 13:26 20° ₩ 13'31 0° 40'-35 minimum elong -2848 Apr 03 j 13:26 20° ₩ 13'31 0° 40'37 conjunction -2840 May 10 j 02:13 25° № 248 0° -19'-35 max. Earth dist2848 Apr 03 j 12:00 20° ₩ 13'19 20.45294 AU minimum elong -2840 May 10 j 02:13 25° № 248 0° 19'33 retrograde -2848 Jul 23 j 17:06 24° ₩ 24'13 retrograde -2840 Aug 28 j 06:34 29° № 20'07				10.70003 AU				11.7 1 707 AU
conjunction	direct	-2047 DEC 1/J 12.3/	10 709 10					10 01767 ATT
minimum elong -2848 Apr 03 j 13:26 20° \(\) \(agniumation	2040 Amm 02: 12:20	200¥ 1212 1	0° 40' 25	max. Earth dist.	-2040 May 09 J 08:38	23 T 00 10	17.71/0/ AU
max. Earth dist.		1 3			agniumation	2940 May 10 : 02-12	250002140	00 101 25
retrograde -2848 Jul 23 j 17:06 24° ★24'13 retrograde -2840 Aug 28 j 06:34 29° Y 20'07								
				20.43294 AU				0 1933
opposition -2646 Oct 0/ j 11.05 22 π22 50 0°-45 -50 opposition -2840 Nov 10 j 14:21 2/° j 1/5/ 0°-19-52	-	•		00 12! 56	-			0° 10' 52
	орроѕшоп	-2040 OCI U/J 11:03	22 \(\pi 22'\)	U -45'-30	opposition	-2040 NOV 10 J 14:21	2/ 11/3/	U -19-32

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•	omena of Uranus fr		•	* * *			age 5
	ical year style is used: Th						
min. Earth dist.	-2840 Nov 11 j 05:24		17.88568 AU	max. Earth dist.	-2833 Jun 12 j 08:38	27° 8 07'07	19.50781 AU
direct	-2839 Jan 24 j 13:16						
max. Earth dist.	-2839 May 14 j 05:58	29° Ƴ 30′01	19.85393 AU	conjunction	-2833 Jun 13 j 12:36		0°06'15
				minimum elong	-2833 Jun 13 j 12:36		0°06'20
conjunction	-2839 May 15 j 01:54	29° Ƴ 33'01		behind sun begin	-2833 Jun 13 j 06:12		
minimum elong	-2839 May 15 j 01:54	29° Ƴ 33'01	0°16'09	behind sun end	-2833 Jun 13 j 18:59		
	-2839 May 22 j 13:05	9° 8			-2833 Aug 01 j 15:15		
retrograde	-2839 Sep 02 j 01:43	3° 8 51'07		retrograde	-2833 Sep 30 j 10:26	1° Ⅲ 33′10	
opposition	-2839 Nov 15 j 06:22	1° 8 48'56	0°-16'00		-2833 Dec 01 j 14:01	30° ₹ 8	
min. Earth dist.	-2839 Nov 16 j 00:04	_	17.82242 AU	opposition	-2833 Dec 12 j 21:24		
	-2838 Jan 05 j 15:51	30° ₹Ƴ		min. Earth dist.	-2833 Dec 13 j 21:46		17.48463 AU
direct	-2838 Jan 29 j 05:58	29° Y 45′22		direct	-2832 Feb 26 j 11:23		
	-2838 Feb 21 j 17:07	9° 8			-2832 May 17 j 08:18	Π °0	
max. Earth dist.	-2838 May 19 j 04:21	4° 8 01'54	19.79113 AU	max. Earth dist.	-2832 Jun 16 j 10:16	1° Ⅱ 48'17	19.46223 AU
		4.				_	
conjunction	-2838 May 20 j 02:09	4° 8 05'12		conjunction	-2832 Jun 17 j 15:51	1° Ⅲ 52'52	0°10'01
minimum elong	-2838 May 20 j 02:09	4° 8 05'12	0°12'35	minimum elong	-2832 Jun 17 j 15:51	1° Ⅱ 52'52	0°10'06
behind sun begin	-2838 May 19 j 21:56	4° 8 04'35		behind sun begin	-2832 Jun 17 j 10:28	1° Ⅲ 52'03	
behind sun end	-2838 May 20 j 06:22	4° 8 05'49		behind sun end	-2832 Jun 17 j 21:14		
retrograde	-2838 Sep 06 j 23:06	8° 8 24'04		retrograde	-2832 Oct 04 j 08:33	6° Ⅱ 15'02	
opposition	-2838 Nov 19 j 22:58	6° 8 21'49		opposition	-2832 Dec 16 j 18:20	4° Ⅱ 12'25	
min. Earth dist.	-2838 Nov 20 j 17:15		17.76017 AU	min. Earth dist.	-2832 Dec 17 j 18:40		17.44169 AU
direct	-2837 Feb 03 j 01:21	4° 8 17'53		direct	-2831 Mar 02 j 12:05	2° Ⅱ 06′27	
max. Earth dist.	-2837 May 24 j 03:45	8° 8 35'42	19.72945 AU				
				conjunction	-2831 Jun 22 j 19:33	6° Ⅱ 35′29	0°13'44
conjunction	-2837 May 25 j 03:14	8° 8 39'15		minimum elong	-2831 Jun 22 j 19:33	6° Ⅱ 35'29	0°13'49
minimum elong	-2837 May 25 j 03:13	8° 8 39'15	0°08'57	behind sun begin	-2831 Jun 22 j 16:09	6° Ⅱ 34'58	
behind sun begin	-2837 May 24 j 21:27	8° 8 38'24		behind sun end	-2831 Jun 22 j 22:57	6° Ⅱ 36′00	
behind sun end	-2837 May 25 j 09:00	8° 8 40'07		max. Earth dist.	-2831 Jun 21 j 14:49		19.42189 AU
retrograde	-2837 Sep 11 j 19:28	12° 8 58'48		retrograde	-2831 Oct 09 j 07:21		
opposition	-2837 Nov 24 j 16:25	10° 8 56'29		opposition	-2831 Dec 21 j 16:12	8° Ⅱ 55'24	0°17'18
min. Earth dist.	-2837 Nov 25 j 13:06		17.69938 AU	min. Earth dist.	-2831 Dec 22 j 17:02		17.40419 AU
direct	-2836 Feb 07 j 19:53	8° 8 52'11		direct	-2830 Mar 07 j 12:44	6° Ⅱ 49'14	
max. Earth dist.	-2836 May 28 j 03:23	13° 8 11'08	19.66968 AU			• •	
				conjunction	-2830 Jun 27 j 23:05		
conjunction	-2836 May 29 j 04:53		0°-5'-16	minimum elong	-2830 Jun 27 j 23:05		
minimum elong	-2836 May 29 j 04:52		0°05'14	max. Earth dist.	-2830 Jun 26 j 17:11		19.38733 AU
behind sun begin	-2836 May 28 j 22:18			retrograde	-2830 Oct 14 j 06:35		
behind sun end	-2836 May 29 j 11:26			opposition	-2830 Dec 26 j 14:37		
	-2836 Jun 27 j 14:41			min. Earth dist.	-2830 Dec 27 j 15:21		17.37268 AU
retrograde	-2836 Sep 15 j 17:29			direct	-2829 Mar 12 j 14:24		
opposition	-2836 Nov 28 j 10:30			max. Earth dist.	-2829 Jul 01 j 22:28	15°Щ59'31	19.35873 AU
min. Earth dist.	-2836 Nov 29 j 07:37		17.64072 AU			—	
	-2836 Dec 11 j 03:08			conjunction	-2829 Jul 03 j 03:09		0°20'56
direct	-2835 Feb 11 j 17:02			minimum elong	-2829 Jul 03 j 03:08		0°21'00
	-2835 Apr 13 j 08:42			retrograde	-2829 Oct 19 j 06:43		
max. Earth dist.	-2835 Jun 02 j 04:50	17° 8 48'23	19.61220 AU	opposition	-2829 Dec 31 j 13:37		
	2025 * 22.5==	1001 }	00.11.20	min. Earth dist.	-2828 Jan 01 j 14:20		17.34696 AU
conjunction	-2835 Jun 03 j 07:07			direct	-2828 Mar 16 j 16:12		
minimum elong	-2835 Jun 03 j 07:06		0°01'24	max. Earth dist.	-2828 Jul 06 j 01:36	20°Щ45'08	19.33591 AU
behind sun begin	-2835 Jun 03 j 00:19					_	
behind sun end	-2835 Jun 03 j 13:54			conjunction	-2828 Jul 07 j 07:12		
retrograde	-2835 Sep 20 j 14:34			minimum elong	-2828 Jul 07 j 07:11		0°24'26
asc. node	-2835 Oct 20 j 02:35			retrograde	-2828 Oct 23 j 06:58		
opposition	-2835 Dec 03 j 05:28			opposition	-2827 Jan 04 j 13:22		
min. Earth dist.	-2835 Dec 04 j 04:28		17.58481 AU	min. Earth dist.	-2827 Jan 05 j 14:16		17.32703 AU
direct	-2834 Feb 16 j 13:39			direct	-2827 Mar 21 j 18:06		
max. Earth dist.	-2834 Jun 07 j 05:32	22° 8 26'55	19.55806 AU	max. Earth dist.	-2827 Jul 11 j 06:59	25° Ⅱ 31'56	19.31863 AU
	20241 00:00:00	220	0002127		2027 1 12:11:5	250H25122	0007127
conjunction	-2834 Jun 08 j 09:38			conjunction	-2827 Jul 12 j 11:17		
minimum elong	-2834 Jun 08 j 09:38		0 02 30	minimum elong	-2827 Jul 12 j 11:17		0 2/43
behind sun begin	-2834 Jun 08 j 02:51			retrograde	-2827 Oct 28 j 08:17		0022121
behind sun end	-2834 Jun 08 j 16:24			opposition	-2826 Jan 09 j 13:47		
retrograde	-2834 Sep 25 j 12:30		0004145	min. Earth dist.	-2826 Jan 10 j 14:06		17.31231 AU
opposition	-2834 Dec 08 j 01:00			direct	-2826 Mar 26 j 21:19		
min. Earth dist.	-2834 Dec 09 j 00:08 -2833 Feb 21 j 12:27		17.33403 AU	may Forth dist	-2826 Jul 11 j 08:57 -2826 Jul 16 j 10:36		10 20645 411
direct	-2000 1°CU 21 J 12.2/	22 O 44 30		max. Earth dist.	-2020 Jul 10 J 10:30	0 201908	19.30645 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2826 in astronomical counting style is the year 2827 BCE in historical counting style. -2826 Jul 17 i 15:17 0°523'39 0°30'43 minimum elong -2818 Aug 25 j 09:30 8°Ω37'28 0°46'18 conjunction -2826 Jul 17 j 15:17 0°923'39 max. Earth dist. -2818 Aug 24 j 15:28 8°**Ω**34'37 19.38454 AU minimum elong 0°30'47 -2826 Nov 02 j 08:28 4°9547'01 -2818 Dec 10 j 06:07 $12^{\circ}\Omega$ 58'16 retrograde retrograde -2825 Jan 14 j 14:40 -2817 Feb 22 j 07:31 $10^{\circ}\Omega$ 56'46 0° 51'54 2°9544'55 0°35'51 opposition opposition -2825 Jan 15 j 15:20 -2817 Feb 22 j 23:51 10° **Ω**55'01 17.40115 AU min. Earth dist. 2°542'14 17.30275 AU min. Earth dist. 8°**Ω**50'57 -2817 May 10 j 11:24 direct -2825 Mar 31 j 23:27 0°938'24 direct -2825 Jul 22 j 19:12 -2817 Aug 30 j 08:45 13°Ω20'42 0°46'50 conjunction 5°511'20 0°33'35 conjunction -2825 Jul 22 j 19:12 minimum elong 5°9511'20 0°33'41 minimum elong -2817 Aug 30 j 08:45 13°**Ω**20'41 0°46'53 max. Earth dist. -2825 Jul 21 j 15:33 5°**©**06'58 19.29926 AU max. Earth dist. -2817 Aug 29 j 15:47 13°Ω18'01 19.41863 AU retrograde -2825 Nov 07 j 10:18 9°934'38 -2817 Sep 26 j 04:29 15°**Ω** -2824 Jan 19 j 16:03 -2817 Dec 15 j 05:26 $17^{\circ}\Omega 40'55$ opposition 7°532'39 0°38'57 retrograde -2824 Jan 20 j 15:39 -2816 Feb 27 j 09:37 15° Ω 39'32 0°52'23 min. Earth dist. 7°530'04 17.29780 AU opposition direct -2824 Apr 05 j 04:23 5°926'08 min. Earth dist. -2816 Feb 27 j 23:11 15° **Ω**38'06 17.43812 AU -2816 Mar 14 j 02:51 15°RΩ conjunction -2824 Jul 26 j 22:53 9°559'12 0°36'14 direct -2816 May 14 j 15:06 13°**Ω**34'00 minimum elong -2824 Jul 26 j 22:53 9°**9**59'12 0°36'19 -2816 Jul 12 j 04:23 15°**Ω** max. Earth dist. -2824 Jul 25 j 19:32 9°954'53 19.29659 AU retrograde -2824 Nov 11 j 09:42 14°522'22 conjunction -2816 Sep 03 j 07:19 $18^{\circ}\Omega$ 02'47 opposition -2823 Jan 23 j 17:53 12°520'27 0°41'46 minimum elong -2816 Sep 03 j 07:19 $18^{\circ}\Omega$ 02'47 min. Earth dist. -2823 Jan 24 j 17:49 12°517'51 17.29754 AU max. Earth dist. -2816 Sep 02 j 17:44 18° Ω 00'38 19.45844 AU direct -2823 Apr 10 j 07:10 10°513'58 retrograde -2816 Dec 19 i 03:11 $22^{\circ}\Omega 22'23$ max. Earth dist. -2823 Jul 30 i 23:43 14°5642'49 19.29870 AU opposition -2815 Mar 03 i 11:42 $20^{\circ}\Omega$ 21'10 $0^{\circ}52'31$ min. Earth dist. -2815 Mar 03 j 23:49 $20^{\circ}\Omega$ 19'53 17.48055 AU -2823 Aug 01 i 02:10 14°5647'00 0°38'38 direct -2815 May 19 j 17:32 $18^{\circ}\Omega$ 15'58 conjunction -2823 Aug 01 j 02:10 14°5547'00 minimum elong 0°38'43 -2823 Nov 16 j 11:23 19°509'57 -2815 Sep 08 j 04:58 $22^{\circ}\Omega 43'39$ 0°47'05 retrograde conjunction -2822 Jan 28 j 19:56 17°508'06 0°44'17 -2815 Sep 08 j 04:58 $22^{\circ}\Omega 43'39$ 0°47'09 opposition minimum elong -2822 Jan 29 j 18:11 17°505'42 17.30193 AU -2815 Sep 07 j 16:34 22° **Q**41'42 19.50360 AU min. Earth dist. max. Earth dist. -2815 Dec 24 j 01:48 $27^{\circ}\Omega$ 02'38 -2822 Apr 15 j 13:05 15°501'40 direct retrograde -2822 Aug 05 j 03:45 19°\$30'32 19.30547 AU -2814 Mar 08 j 13:24 25° Ω 01'35 0°52'18 max. Earth dist. opposition -2814 Mar 08 j 22:58 25°**Ω**00'34 17.52816 AU min. Earth dist. -2822 Aug 06 j 04:54 19°534'30 0°40'45 -2814 May 24 j 18:55 22°**Ω**56'44 direct conjunction -2822 Aug 06 j 04:54 19°534'30 minimum elong -2822 Nov 21 j 10:04 23°557'09 -2814 Sep 13 j 01:55 $27^{\circ}\Omega 23'16$ 0°46'44 retrograde conjunction -2821 Feb 02 j 22:15 21°555'23 0°46'29 -2814 Sep 13 j 01:55 $27^{\circ}\Omega 23'16$ 0°46'47 opposition minimum elong -2821 Feb 03 j 20:37 21°552'58 17.31116 AU -2814 Sep 12 j 16:51 27° Ω 21'51 19.55345 AU min. Earth dist. max. Earth dist. direct -2821 Apr 20 j 16:19 19°5549'00 -2814 Oct 27 j 13:51 0° Mg max. Earth dist. -2821 Aug 10 j 06:44 24°517'39 19.31723 AU retrograde -2814 Dec 28 j 23:32 1° m/41'32 -2813 Mar 05 j 22:47 30°R**Ω** conjunction -2821 Aug 11 j 07:06 24°521'30 0°42'35 opposition -2813 Mar 13 j 14:53 29° **Q**40'40 0°51'44 -2821 Aug 11 j 07:06 24°\$21'30 min. Earth dist. -2813 Mar 13 j 22:46 29° **Q**39'50 17.57989 AU minimum elong -2821 Nov 26 j 10:54 28°543'46 direct -2813 May 29 j 21:13 27° **Ω**36'14 retrograde -2820 Feb 08 j 00:24 26°542'03 0°48'22 -2813 Aug 15 j 09:03 opposition min. Earth dist. -2820 Feb 08 j 20:40 26°539'52 17.32536 AU 2° m 01'29 0°46'06 direct -2820 Apr 24 j 22:53 24°535'45 conjunction -2813 Sep 17 i 21:56 max. Earth dist. -2820 Aug 14 j 10:38 29°504'16 19.33405 AU minimum elong -2813 Sep 17 i 21:56 2° m 01'29 0°46'08 max. Earth dist. -2813 Sep 17 j 14:01 2° m 00'15 19.60707 AU -2820 Aug 15 j 08:45 29°\$07'46 0°44'06 conjunction retrograde -2812 Jan 02 j 20:41 6° m 19'03 opposition minimum elong -2820 Aug 15 i 08:45 29°507'46 0°44'11 -2812 Mar 17 j 15:57 4° m 18'20 0°50'50 -2820 Aug 29 j 04:34 $0^{\circ}\Omega$ min. Earth dist. -2812 Mar 17 j 21:46 4° mp 17'44 17.63521 AU retrograde -2820 Nov 30 i 08:41 3°Ω29'36 direct -2812 Jun 02 j 21:42 2° m) 14'17 1°**Ω**27'56 0°49'54 -2819 Feb 12 j 02:56 opposition min. Earth dist. -2819 Feb 12 j 22:50 1°**Ω**25'48 17.34489 AU conjunction -2812 Sep 21 j 17:19 6° Mp 38'12 0°45'09 -2812 Sep 21 j 17:19 -2819 Mar 21 j 20:12 30°Rூ minimum elong 6°M/38'12 0°45'11 direct -2819 Apr 30 j 02:19 29°521'45 max. Earth dist. -2812 Sep 21 j 12:29 6° Mp 37'27 19.66389 AU -2819 Jun 07 j 12:42 0 $^{\circ}$ Ω retrograde -2811 Jan 06 j 17:31 10° m 54'59 -2811 Mar 22 j 16:47 8° m 54'26 opposition 0°49'37 -2819 Aug 20 j 09:22 3°Ω53'07 0°45'19 -2811 Mar 22 j 20:32 8° M 54'03 17.69324 AU conjunction min. Earth dist. -2819 Aug 20 j 09:22 3°**Ω**53'07 0°45'23 direct -2811 Jun 07 j 23:55 6° Mp 50'48minimum elong -2819 Aug 19 j 12:18 3°**Ω**49'48 19.35643 AU max. Earth dist. retrograde -2819 Dec 05 j 08:49 8°**£**14′29 conjunction -2811 Sep 26 j 11:35 11° m 13'16 0°43'56 opposition -2818 Feb 17 j 05:16 6°Ω12'52 0°51'05 minimum elong -2811 Sep 26 j 11:35 11° mp 13'16 0°43'57 min. Earth dist. -2818 Feb 17 j 22:32 6°**Ω**11'01 17.37010 AU max. Earth dist. -2811 Sep 26 j 08:01 11° m 12'42 19.72310 AU direct -2818 May 05 j 08:22 4°**Ω**06'51 retrograde -2810 Jan 11 j 12:57 15° Mp 29'17 -2810 Mar 27 j 17:07 13° Mp 28'50 0°48'05 opposition -2818 Aug 25 j 09:30 8°**Ω**37'28 0°46'14 min. Earth dist. -2810 Mar 27 j 19:10 13° Mp 28'37 17.75350 AU conjunction

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Attention, astronomical year style is used: The year -2810 in astronomical counting style is the year 2811 BCE in historical counting style. direct -2810 Jun 12 j 23:33 11° m 25'35 direct -2802 Jul 19 j 20:17 16°**£**51'33 -2810 Oct 01 j 05:14 15° mp 46'33 0°42'26 conjunction -2802 Nov 04 j 16:29 20° **2**59'42 0°22'48 conjunction -2810 Oct 01 j 05:14 15° mp 46'33 0°42'27 -2802 Nov 04 j 16:29 20° **2**59'42 0°22'45 minimum elong minimum elong -2810 Oct 01 j 04:19 15° Mp 46'24 19.78421 AU -2802 Nov 05 j 07:48 21° \(\Omega\) 02'00 20.31076 AU max. Earth dist. max. Earth dist. -2809 Jan 16 j 07:58 20° Mp 01'43 -2801 Feb 20 j 13:41 25° **2**08'10 retrograde retrograde -2801 May 08 j 12:48 23°**♀**08'25 0°23'32 opposition -2809 Apr 01 j 16:41 18° Mp 01'24 0°46'15 opposition min. Earth dist. -2809 Apr 01 j 16:27 18° Mp 01'25 17.81519 AU min. Earth dist. -2801 May 07 j 20:00 23°**♀**10'07 18.34513 AU -2801 Jul 24 j 13:20 21°**♀**08'33 direct -2809 Jun 18 j 00:56 15° **m** 58'32 direct conjunction -2809 Oct 05 j 21:53 20° m 17'56 0°40'40 conjunction -2801 Nov 09 j 02:17 25° **2**15'13 0°19'40 -2809 Oct 05 j 21:53 20° m 17'56 -2801 Nov 09 j 02:17 25°**£**15'13 0°19'39 minimum elong 0°40'40 minimum elong -2809 Oct 05 j 22:20 20° m 18'00 19.84653 AU -2801 Nov 09 j 19:48 25°**2**17'51 20.37952 AU max. Earth dist. max. Earth dist. retrograde -2808 Jan 21 j 01:43 24° m 32'16 retrograde -2800 Feb 25 j 02:01 29° **2**22'59 opposition -2808 Apr 05 j 15:54 22° m 32'00 0°44'08 opposition -2800 May 12 j 06:05 27°**£**23'22 0°20'00 min. Earth dist. -2808 Apr 05 j 14:17 22° m 32'10 17.87811 AU min. Earth dist. -2800 May 11 j 12:38 27°**£**25'08 18.41364 AU direct -2808 Jun 21 j 22:53 20° Mp 29'30 direct -2800 Jul 28 j 02:53 25°**♀**23'56 conjunction -2808 Oct 09 j 13:33 24° mp 47'18 0°38'40 conjunction -2800 Nov 12 j 11:20 29°**£**29'09 0°16'28 minimum elong -2808 Oct 09 j 13:33 24° mp 47'18 minimum elong -2800 Nov 12 j 11:20 29° **2**29'09 0°16'25 max. Earth dist. -2808 Oct 09 j 16:30 24° m 47'45 max. Earth dist. -2800 Nov 13 j 06:12 29°**2**31'58 20.44758 AU retrograde -2807 Jan 24 j 19:20 29° m 00'45 -2800 Nov 21 i 01:33 0°M opposition -2807 Apr 10 j 14:23 27° m 00'33 0°41'47 retrograde -2799 Feb 28 i 16:05 3°M36'14 min. Earth dist. -2807 Apr 10 i 10:02 27° m 01'00 17.94187 AU opposition -2799 May 16 j 22:31 1°M36'45 0°16'24 direct -2807 Jun 26 j 22:33 24° m 58'24 min. Earth dist. -2799 May 16 j 02:29 1°ML38'47 18.48099 AU -2799 Jul 02 j 12:47 30°R ₽ -2807 Oct 14 j 04:18 29° mp 14'33 0°36'27 -2799 Aug 01 j 18:17 29°**£**37'45 conjunction direct -2807 Oct 14 j 04:18 29° mp 14'33 0°36'27 -2799 Aug 31 j 06:24 minimum elong oom. max. Earth dist. -2807 Oct 14 j 09:00 29° mp 15'16 19.97421 AU 3°M41'35 0°13'11 -2807 Oct 26 j 13:01 -2799 Nov 16 j 20:00 0∘∙თ conjunction -2806 Jan 29 j 11:21 3°**₽**27'08 -2799 Nov 16 j 20:00 retrograde minimum elong 3°M41'35 0°13'09 -2806 Apr 15 j 12:04 -2799 Nov 16 j 16:01 1°**2**26'58 0°39'11 behind sun begin 3°M41'01 opposition 1°**≏**27'32 18.00669 AU -2799 Nov 17 j 00:00 min. Earth dist. -2806 Apr 15 j 06:33 behind sun end 3°M42'10 -2806 May 24 j 16:33 30°R M max. Earth dist. -2799 Nov 17 j 16:48 3°M.44'41 20.51396 AU -2806 Jul 01 j 18:29 29° m 25'08 -2798 Mar 05 j 03:53 direct retrograde 7°M48'00 5°ML48'39 0°12'43 -2806 Aug 07 j 16:38 -2798 May 21 j 14:11 0∘**⊽** opposition min. Earth dist. -2798 May 20 j 17:58 5°M50'41 18.54641 AU conjunction -2806 Oct 18 j 18:04 3°**△**39'39 0°34'02 direct -2798 Aug 06 j 06:34 3° M $_{50'03}$ minimum elong -2806 Oct 18 j 18:04 3°**2**39'39 0°34'02 max. Earth dist. -2806 Oct 19 j 01:06 3°**º**40'43 20.03955 AU conjunction -2798 Nov 21 j 04:06 7°M52'33 0°09'52 retrograde -2805 Feb 03 j 03:44 7°**£**51'21 minimum elong -2798 Nov 21 j 04:06 7°M52'33 0°09'49 -2805 Apr 20 j 08:55 5°**£**51'13 0°36'23 behind sun begin -2798 Nov 20 j 22:43 7°**ጤ**51'47 opposition min. Earth dist. -2805 Apr 20 j 00:23 5°**£**52'06 18.07243 AU behind sun end -2798 Nov 21 j 09:28 7°**ጤ**53'20 -2805 Jul 06 j 15:55 3°**₽**49'44 max. Earth dist. -2798 Nov 22 j 01:36 7°ML55'45 20.57815 AU direct -2797 Mar 09 j 16:48 11°ML58'20 retrograde -2805 Oct 23 i 06:51 conjunction 8°**♀**02'36 0°31'27 min. Earth dist. -2797 May 25 i 06:50 10° ML01'20 18.60919 AU minimum elong -2805 Oct 23 i 06:51 8°**♀**02'36 0°31'26 opposition -2797 May 26 j 05:08 9°M59'06 0°08'59 max. Earth dist. -2805 Oct 23 i 16:01 8°**£**04'00 20.10580 AU direct -2797 Aug 10 j 20:15 8°M00'52 retrograde -2804 Feb 07 i 18:10 12° **2**13'28 -2804 Apr 24 j 05:09 10° **2**13'23 0°33'24 -2797 Nov 25 j 11:39 12°ML02'05 0°06'30 opposition conjunction min. Earth dist. -2804 Apr 23 j 19:25 10° **2**14'23 18.13937 AU -2797 Nov 25 i 11:39 12°ML02'05 0°06'27 minimum elong direct -2804 Jul 10 j 09:42 8°**♀**12'16 behind sun begin -2797 Nov 25 j 05:29 12°ML01'12 behind sun end -2797 Nov 25 j 17:49 12°Ml02'58 conjunction -2804 Oct 26 j 18:52 12°**2**23'31 0°28'42 max. Earth dist. -2797 Nov 26 j 10:49 12°M 05'31 20.63922 AU minimum elong -2804 Oct 26 j 18:52 12° \alpha 23'31 0° 28'40 -2796 Jan 20 j 11:35 15°M max. Earth dist. -2804 Oct 27 j 06:12 12° \overline 25'14 20.17335 AU retrograde -2796 Mar 13 j 03:43 16° ML 07'16 retrograde -2803 Feb 11 j 09:42 16°**△**33'33 -2796 May 07 j 11:47 15°RML -2803 Apr 28 j 11:33 14°**2**34'52 18.20739 AU opposition -2796 May 29 j 19:36 14° ML08'06 0°05'14 min. Earth dist. -2803 Apr 29 j 00:29 14°**△**33'33 min. Earth dist. -2796 May 28 j 21:17 14° ML 10'20 18.66863 AU opposition 0°30'15 -2803 Jul 15 j 04:54 12°**♀**32'50 direct -2796 Aug 14 j 08:08 12°M 10'13 direct -2796 Nov 08 j 16:31 15°M conjunction -2803 Oct 31 j 06:01 16°**£**42'30 0°25'48 minimum elong -2803 Oct 31 j 06:01 16°**£**42'30 0°25'47 conjunction -2796 Nov 28 j 18:47 16°**™**10'11 0°03'08 max. Earth dist. -2803 Oct 31 j 19:37 16°**2**44'33 20.24177 AU minimum elong -2796 Nov 28 j 18:47 16°ML10'11 0°03'05 retrograde -2802 Feb 15 j 22:55 20°**£**51'45 behind sun begin -2796 Nov 28 j 12:17 16°ML09'15 -2802 May 03 j 19:10 18°**♀**51'51 0°26'57 behind sun end -2796 Nov 29 j 01:17 16°ML11'07 opposition min. Earth dist. -2802 May 03 j 05:15 18°**2**53'16 18.27619 AU max. Earth dist. -2796 Nov 29 j 18:13 16°ML13'38 20.69688 AU

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Earth dist. -2788 Jul 02 j 13:15 16° ₹ 31'36 0°-23'-20 opposition -2795 Dec 03 j 01:33 20°ML16'50 0°00'-20 -2788 Sep 16 j 09:48 14° ₹35'15 conjunction direct -2795 Dec 03 j 01:31 20°M16'50 minimum elong 0°00'25 -2788 Dec 30 j 14:15 18°**尽**27'58 -2795 Dec 02 j 19:01 20°ML15'54 behind sun begin conjunction 0°-22'-33 -2788 Dec 30 j 14:15 18°**尽** 27'58 behind sun end -2795 Dec 03 j 08:02 20°M 17'46 minimum elong 0°22'39 -2788 Dec 31 j 18:46 18° ₹32'04 21.02852 AU max. Earth dist. -2795 Dec 04 j 02:20 20°M20'29 20.75056 AU max. Earth dist. -2794 Mar 22 j 01:01 24°M20'52 -2787 Apr 19 j 15:13 22° ₹29'24 retrograde retrograde -2794 Jun 07 j 22:05 22°M21'45 -2787 Jul 06 j 21:49 20° ₹30'13 0°-26'-31 opposition 0°-2'-14 opposition min. Earth dist. -2794 Jun 06 j 22:14 22°M24'08 18.77610 AU min. Earth dist. -2787 Jul 05 j 18:03 20° ₹32'59 19.04256 AU direct -2794 Aug 23 j 07:11 20°M24'23 direct -2787 Sep 20 j 16:03 18°**尽** 34'02 conjunction -2794 Dec 07 j 07:41 24°M22'03 0°-3'-45 conjunction -2786 Jan 03 j 19:01 22°**尽** 26'16 0°-25'-22 minimum elong -2794 Dec 07 j 07:40 24° ML 22'03 0°03'49 minimum elong -2786 Jan 03 j 19:01 22° ₹726'16 0°25'27 behind sun begin -2794 Dec 07 j 01:12 24°M21'07 max. Earth dist. -2786 Jan 05 j 00:26 22° ₹30'30 21.05472 AU behind sun end -2794 Dec 07 j 14:08 24° ML22'58 retrograde -2786 Apr 23 j 22:24 26° ₹27'34 max. Earth dist. -2794 Dec 08 j 08:32 24°ML25'41 20.80033 AU min. Earth dist. -2786 Jul 10 j 02:57 24° 731'09 19.06669 AU retrograde -2793 Mar 26 j 11:57 28° M25'33 opposition -2786 Jul 11 j 06:05 24° ₹728'26 0°-29'-33 -2786 Sep 24 j 21:40 22° ₹32'25 min. Earth dist. -2793 Jun 11 j 08:48 26° ML 28'56 18.82398 AU direct opposition -2793 Jun 12 j 10:07 26° M26'24 0°-5'-56 direct -2793 Aug 27 j 17:29 24°M29'13 conjunction -2785 Jan 07 j 23:40 26° ₹724'16 0°-28'-4 minimum elong -2785 Jan 07 i 23:40 26° ₹24'16 0°28'10 -2793 Dec 11 j 13:29 28°M25'50 0°-7'-3 max. Earth dist. -2785 Jan 09 j 04:10 26° ₹28'21 21.07673 AU conjunction -2793 Dec 11 j 13:29 28°M25'50 0°07'09 -2785 Mar 26 j 14:45 0°궁 minimum elong -2793 Dec 11 j 07:26 28°M24'58 -2785 Apr 28 j 07:20 0°る25'31 behind sun begin retrograde -2793 Dec 11 j 19:32 28°M26'41 -2785 May 31 j 13:42 30°R ✓ behind sun end -2785 Jul 14 j 10:46 28° ₹29'08 19.08643 AU -2793 Dec 12 j 15:49 28°M29'40 20.84631 AU min. Earth dist. max. Earth dist. -2792 Jan 08 j 03:30 -2785 Jul 15 j 13:59 28° ₹26'25 0°-32'-28 0°**∡**¹ opposition 2°**х** 28′50 -2792 Mar 29 j 19:54 -2785 Sep 29 j 03:15 26° ₹30'30 retrograde direct -2784 Jan 05 j 18:12 -2792 Jun 15 j 21:41 0°**-**9′-35 0°-9′-35 0°る opposition -2792 Jun 14 j 20:27 0°**∡**'32'11 18.86829 AU min. Earth dist. -2784 Jan 12 j 04:40 0°る22'05 0°-30'-37 -2792 Jun 28 j 09:40 30°RML conjunction -2792 Aug 31 j 03:15 28°M32'39 -2784 Jan 12 j 04:40 0°る22'05 0°30'43 direct minimum elong -2792 Oct 29 j 23:34 0°**∡**¹ max. Earth dist. -2784 Jan 13 j 09:38 0°る26'14 21.09395 AU retrograde -2784 May 01 j 15:02 4°る23'20 conjunction -2792 Dec 14 j 18:48 2°**₹**28'17 0°-10'-18 opposition -2784 Jul 18 j 21:38 2°**ප**24'15 0°-35'-12 minimum elong -2792 Dec 14 j 18:48 2°**х** 28′17 0°10'24 min. Earth dist. -2784 Jul 17 j 19:22 2°る26'53 19.10111 AU behind sun begin -2792 Dec 14 j 13:36 2°**х** 27′32 direct -2784 Oct 02 j 08:27 0°る28'27 behind sun end -2792 Dec 14 j 23:59 2°×29'01 max. Earth dist. -2792 Dec 15 j 21:13 2°**尽**32'07 20.88904 AU -2783 Jan 15 j 09:46 4°る19'50 0°-33'-2 conjunction -2791 Apr 03 j 06:13 6°**х** 30′51 -2783 Jan 15 j 09:46 4°る19'50 0°33'08 retrograde minimum elong -2791 Jun 19 i 05:52 4°**∡**34'17 18.90949 AU -2783 Jan 16 i 13:16 4°る23'46 21.10600 AU min. Earth dist. max. Earth dist. -2791 Jun 20 j 08:27 4°**∡**°31'38 opposition 0°-13'-10 retrograde -2783 May 05 j 23:37 8°る21'08 -2791 Sep 04 j 12:07 2°**∡**³34'47 -2783 Jul 22 i 03:11 direct min. Earth dist. 6°る24'37 19.11036 AU opposition -2783 Jul 23 i 04:59 6° ත් 22'02 0°-37'-47 -2791 Dec 19 i 00:01 6°**х** 29'32 0°-13'-29 direct -2783 Oct 06 j 13:38 4°**ප**26'15 conjunction -2791 Dec 19 i 00:01 6°**х** 29'32 0°13'35 minimum elong behind sun begin -2791 Dec 18 j 20:19 6°×729'01 -2782 Jan 19 j 15:16 8°**궁**17'33 0°-35'-17 conjunction behind sun end -2791 Dec 19 j 03:44 6°**х** 30′04 -2782 Jan 19 j 15:16 8°**궁**17'33 0°35'23 minimum elong 6°**₮**33'34 20.92854 AU -2782 Jan 20 j 18:42 max. Earth dist. -2791 Dec 20 j 03:51 max. Earth dist. 8°る21'27 21.11221 AU retrograde -2790 Apr 07 j 13:08 10°**х** 31'43 retrograde -2782 May 10 j 07:07 12°る18'54 opposition -2790 Jun 24 j 18:29 8°**х** 32′29 0°-16'-39 min. Earth dist. -2782 Jul 26 j 11:25 10°중22'15 19.11359 AU 18.94752 AU 0°-40'-11 min. Earth dist. -2790 Jun 23 j 16:05 8°**∡**³35′07 opposition -2782 Jul 27 j 11:59 10°**⋜**19'47 -2790 Sep 08 j 19:56 6°**х** 35′49 direct -2782 Oct 10 j 18:35 8°₹24'00 direct -2790 Dec 23 j 04:55 10° ₹29'47 0°-16'-36 -2781 Jan 23 j 20:48 12°♂15'15 0°-37'-22 conjunction conjunction -2790 Dec 23 j 04:54 10°**尽**29'47 -2781 Jan 23 j 20:48 12°정15'15 0°37'28 minimum elong 0°16'42 minimum elong -2790 Dec 24 j 08:33 10° ₹33'47 20.96511 AU max. Earth dist. max. Earth dist. -2781 Jan 24 j 22:24 12°る18'54 21.11261 AU retrograde -2789 Apr 11 j 22:59 14° ₹31'38 retrograde -2781 May 14 j 15:39 16°중16'44 min. Earth dist. -2789 Jun 28 j 00:36 12° ₹35'09 18.98259 AU opposition -2781 Jul 31 j 18:51 14°쥥17'32 0°-42'-23 opposition -2789 Jun 29 j 04:04 12°**尽** 32'24 0°-20'-3 min. Earth dist. -2781 Jul 30 j 18:59 14° 중19'55 19.11107 AU -2789 Sep 13 j 03:20 10° ₹35'54 direct -2781 Oct 14 j 23:30 12°₹21'40 direct

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Earth dist. -2780 Oct 18 j 04:13 16°る19'20 -2772 Jun 19 j 22:54 22°≈12'00 direct retrograde opposition -2772 Sep 05 j 03:19 20°≈11'51 0°-52'-10 -2779 Jan 31 j 08:34 20°**♂**10'45 0°-40'-59 -2772 Sep 04 j 14:22 20°≈13'11 18.88781 AU conjunction min. Earth dist. -2772 Nov 18 j 17:16 18°≈14'30 minimum elong -2779 Jan 31 j 08:34 20° **조**10'45 0°41'04 direct max. Earth dist. -2779 Feb 01 j 08:13 20°중14'06 21.09657 AU -2779 May 22 j 07:28 24°る12'34 -2771 Mar 05 j 00:38 22°≈10'24 retrograde conjunction 0°-47'-8 -2779 Aug 07 j 10:02 22°る15'18 19.08982 AU -2771 Mar 05 j 00:38 22°≈10'24 0°47'12 min. Earth dist. minimum elong opposition -2779 Aug 08 j 07:42 22°る13'07 0°-46'-10 max. Earth dist. -2771 Mar 05 j 13:35 22°≈12'15 20.86632 AU direct -2779 Oct 22 j 08:47 20°중17'00 retrograde -2771 Jun 24 j 10:32 26°≈15'48 opposition -2771 Sep 09 j 10:07 24°≈15'33 conjunction -2778 Feb 04 j 14:58 24°る08'39 0°-42'-30 min. Earth dist. -2771 Sep 08 j 23:09 24°≈16'41 18.84411 AU minimum elong -2778 Feb 04 j 14:58 24°**⋜**08'39 0°42'36 direct -2771 Nov 22 j 23:12 22°≈17'58 max. Earth dist. -2778 Feb 05 j 14:30 24°る12'00 21.08109 AU retrograde -2778 May 26 j 14:39 28°る10'42 conjunction -2770 Mar 09 j 11:45 26°≈14'51 0°-46'-53 opposition -2778 Aug 12 j 13:52 26°る11'08 0°-47'-43 minimum elong -2770 Mar 09 j 11:45 26°≈14'51 0°46'57 min. Earth dist. -2778 Aug 11 j 17:23 26°る13'12 19.07211 AU max. Earth dist. -2770 Mar 09 j 23:41 26°≈16'34 20.82044 AU direct -2778 Oct 26 j 13:20 24°る14'52 -2770 May 30 j 16:13 0°**∀** retrograde -2770 Jun 28 i 21:24 0°\ 20'54 -2770 Jul 28 j 07:51 30°R≈ conjunction -2777 Feb 08 j 21:27 28°る06'49 0°-43'-49 -2777 Feb 08 i 21:26 28° ₹ 06'49 0°43'54 -2770 Sep 13 j 17:19 28°≈20'34 0°-51'-38 minimum elong opposition max. Earth dist. -2777 Feb 09 j 19:07 28°る09'54 21.06141 AU min. Earth dist. -2770 Sep 13 j 08:02 28°≈21'32 18.79599 AU -2777 Mar 15 j 08:25 direct -2770 Nov 27 j 05:15 26°≈22'44 0°≈≈ -2777 May 30 j 23:34 2°≈09'11 -2769 Mar 07 j 23:29 0°**∀** retrograde -2777 Aug 16 j 20:01 0°≈09'28 0°-49'-3 opposition -2777 Aug 16 j 00:27 -2769 Mar 13 j 23:20 0°\(\frac{1}{20}\)'39 0°-46'-24 min. Earth dist. 0°≈11'27 19.05048 AU conjunction -2777 Aug 20 j 17:32 30°R♂ -2769 Mar 13 j 23:20 0°\(\frac{1}{20}\)'39 0°46'27 minimum elong -2777 Oct 30 j 17:24 28°정13'02 -2769 Mar 14 j 08:00 0°**升**21'54 20.77021 AU direct max. Earth dist. -2776 Jan 05 j 13:40 -2769 Jul 03 j 09:40 4°**)**€27'25 0°≈ retrograde -2769 Sep 18 j 00:59 2° **★**26'56 0°-50'-57 opposition -2776 Feb 13 j 04:36 2°≈05'24 0°-44'-55 -2769 Sep 17 j 17:53 2°**₭**27'40 18.74355 AU conjunction min. Earth dist. -2776 Feb 13 j 04:36 -2769 Dec 01 j 12:32 0°**)** 28'46 minimum elong 2°≈05'24 0°45'00 direct max. Earth dist. -2776 Feb 14 j 02:07 2°≈08'27 21.03782 AU retrograde -2776 Jun 03 j 07:39 6°≈08'07 conjunction -2768 Mar 17 j 12:02 4°**)** €27'49 0°-45'-39 min. Earth dist. -2776 Aug 19 j 07:39 4°≈10'10 19.02503 AU minimum elong -2768 Mar 17 j 12:02 4°**¥**27'49 0°45'43 4°**₭**28'53 20.71558 AU opposition -2776 Aug 20 j 02:02 4°**≈**08'18 0°-50'-10 max. Earth dist. -2768 Mar 17 j 19:30 direct -2776 Nov 02 j 22:13 2°≈11'42 retrograde -2768 Jul 06 j 21:23 8°\ 35'16 -2768 Sep 21 j 08:47 6°**)** 34'38 0°-50'-1 opposition -2775 Feb 16 j 12:09 6°≈04'34 0°-45'-48 min. Earth dist. -2768 Sep 21 j 03:24 6°¥35'12 18.68676 AU conjunction -2775 Feb 16 j 12:09 6°≈04'34 0°45'53 direct -2768 Dec 04 j 20:07 4°**)**€36′08 minimum elong -2775 Feb 17 i 07:28 max. Earth dist. 6°≈07'19 21.01069 AU -2775 Jun 07 j 17:17 -2767 Mar 22 j 01:22 8°\(\)36'19 0°-44'-40 retrograde 10°≈07'43 conjunction -2767 Mar 22 j 01:22 8°**)** 36'19 0°44'43 opposition -2775 Aug 24 j 08:11 8°≈07'47 0°-51'-2 minimum elong 8°**升**36'54 20.65698 AU min. Earth dist. -2775 Aug 23 j 14:59 8°≈09'32 18.99612 AU max. Earth dist. -2767 Mar 22 i 05:21 direct -2775 Nov 07 j 02:04 6°≈10'59 retrograde -2767 Jul 11 i 09:55 12° ¥ 44'30 opposition -2767 Sep 25 j 17:06 10° ¥43'41 0°-48'-48 -2774 Feb 20 j 20:19 10°≈04'29 0°-46'-29 min. Earth dist. -2767 Sep 25 j 14:06 10° \(\)44'00 18.62635 AU conjunction -2774 Feb 20 j 20:19 10°≈04'29 direct -2767 Dec 09 j 04:06 8°**){**44'47 minimum elong 0°46'33 max. Earth dist. -2774 Feb 21 j 15:16 10°≈07'11 20.97993 AU retrograde -2774 Jun 12 j 02:13 14°≈08'06 conjunction -2766 Mar 26 j 15:27 12° **€** 46'13 0°-43'-27 opposition -2774 Aug 28 j 14:18 12°≈08'05 0°-51'-40 minimum elong -2766 Mar 26 j 15:27 12° **€** 46'13 0°43'30 min. Earth dist. -2774 Aug 27 j 22:23 12°≈09'43 18.96354 AU max. Earth dist. -2774 Nov 11 j 07:16 10°≈11'08 retrograde -2766 Jul 15 j 22:54 16° **€** 55'08 direct -2766 Sep 30 j 01:39 14° **∺** 54'08 0°-47'-20 opposition -2773 Feb 25 j 04:59 14°≈05'20 0°-46'-56 min. Earth dist. -2766 Sep 30 j 00:05 14° ¥ 54'17 18.56283 AU conjunction -2773 Feb 25 j 04:59 14°≈05'20 direct -2766 Dec 13 j 13:24 12° **₭** 54'50 minimum elong 0°47'01 max. Earth dist. -2773 Feb 25 j 21:28 14°≈07'41 20.94577 AU -2773 Mar 13 j 07:16 15°≈ conjunction retrograde -2773 Jun 16 j 12:55 18°≈09'30 minimum elong -2765 Mar 31 j 06:11 16° ¥ 57'32 0°42'01 opposition -2773 Sep 01 j 20:43 16°≈09'24 0°-52'-2 max. Earth dist. -2765 Mar 31 j 05:49 16° ★ 57'29 20.53033 AU min. Earth dist. -2773 Sep 01 j 06:16 16°≈10'53 18.92761 AU retrograde -2765 Jul 20 j 11:34 21°**₭**07'14 -2773 Oct 02 j 00:57 15°R≈ -2765 Oct 04 j 10:42 19° **** 06'02 0°-45'-36 opposition

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Attention, astronom	nical year style is used: T			unting style is the year			
min. Earth dist.	-2765 Oct 04 j 11:28		18.49726 AU	min. Earth dist.	-2757 Nov 07 j 22:34		17.95783 AU
direct	-2765 Dec 17 j 21:54	17° ∺ 06′18		direct	-2756 Jan 21 j 04:01	21° Y 42'51	
agniunation	-2764 Apr 03 j 21:52	210¥10:22	0° 40' 17	agniumation	2756 May 10 i 10:12	250₩50!25	0°-19'-11
conjunction minimum elong	-2764 Apr 03 j 21:52			conjunction minimum elong	-2756 May 10 j 10:12 -2756 May 10 j 10:12		0°19'11
max. Earth dist.	-2764 Apr 03 j 20:36			max. Earth dist.	-2756 May 09 j 16:20		
retrograde	-2764 Jul 24 j 02:10		20.40388 AU	max. Earth dist.	-2756 Aug 03 j 14:08	0° 8	19.92479 AU
opposition	-2764 Oct 07 j 20:07		0°-43'-36	retrograde	-2756 Aug 28 j 15:10	0° 8 16'44	
min. Earth dist.	-2764 Oct 07 j 20:07			renograde	-2756 Sep 22 j 19:32		
direct	-2764 Dec 21 j 08:51		10.45005 710	opposition	-2756 Nov 10 j 23:06	28° Υ 14'38	0°-19'-25
direct	-2704 Dec 21 j 00.31	21 /(1)20		min. Earth dist.	-2756 Nov 11 j 14:23		17.89170 AU
conjunction	-2763 Apr 08 j 14:15	25° ¥ 24'48	0°-38'-22	direct	-2755 Jan 24 j 21:54		17.07170710
minimum elong	-2763 Apr 08 j 14:15			unoot	-2755 May 07 j 04:35	0°8	
max. Earth dist.	-2763 Apr 08 j 09:43				2700 May 07 j 0 1.50	ů O	
retrograde	-2763 Jul 28 j 15:13		20.59 020 110	conjunction	-2755 May 15 j 09:45	0° 8 29'39	0°-15'-46
opposition	-2763 Oct 12 j 06:06		0°-41'-22	minimum elong	-2755 May 15 j 09:45	0° 8 29'39	
min. Earth dist.	-2763 Oct 12 j 10:25			max. Earth dist.	-2755 May 14 j 13:16	_	19.85877 AU
direct	-2763 Dec 25 j 18:35			retrograde	-2755 Sep 02 j 09:39	4° 8 47'45	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		opposition	-2755 Nov 15 j 15:01	2° 8 45'34	0°-15'-33
conjunction	-2762 Apr 13 j 07:36	29°) 40′57	0°-36'-14	min. Earth dist.	-2755 Nov 16 j 08:56		17.82609 AU
minimum elong	-2762 Apr 13 j 07:36			direct	-2754 Jan 29 j 14:14	0° 8 42'01	
max. Earth dist.	-2762 Apr 13 j 02:15		20.32799 AU	max. Earth dist.	-2754 May 19 j 11:56		19.79365 AU
	-2762 Apr 18 j 17:31	0° Υ			,,		
retrograde	-2762 Aug 02 j 07:01	3° Y ′53'07		conjunction	-2754 May 20 j 10:02	5° 8 01'45	0°-12'-13
opposition	-2762 Oct 16 j 16:40		0°-38'-53	minimum elong	-2754 May 20 j 10:02	5° 8 01'45	0°12'12
min. Earth dist.	-2762 Oct 16 j 21:52		18.29375 AU	behind sun begin	-2754 May 20 j 05:36	5° 8 01'05	
	-2762 Dec 11 j 05:31	30° Ŗ ₩		behind sun end	-2754 May 20 j 14:28	5° 8 02'24	
direct	-2762 Dec 30 j 07:05	29° ¥ 50′28		retrograde	-2754 Sep 07 j 07:38	9° 8 20'34	
	-2761 Jan 18 j 05:59	0° Y		opposition	-2754 Nov 20 j 07:30	7° 8 18'16	0°-11'-33
	v			min. Earth dist.	-2754 Nov 21 j 01:58	7° 8 16'16	17.76156 AU
conjunction	-2761 Apr 18 j 01:31	3° Y ′58'56	0°-33'-52	direct	-2753 Feb 03 j 10:10	5° 8 14'19	
minimum elong	-2761 Apr 18 j 01:31	3° Y ′58'56	0°33'53	max. Earth dist.	-2753 May 24 j 11:00	9° 8 31'55	19.72981 AU
max. Earth dist.	-2761 Apr 17 j 17:07	3° Y ′57'42	20.25976 AU				
retrograde	-2761 Aug 06 j 21:13	8° Y 11'58		conjunction	-2753 May 25 j 10:56	9° 8 35'33	0°-8'-35
opposition	-2761 Oct 21 j 03:59	6° Y 10′08	0°-36'-10	minimum elong	-2753 May 25 j 10:56	9° 8 35'33	0°08'32
min. Earth dist.	-2761 Oct 21 j 11:31	6° Y ′09′20	18.22569 AU	behind sun begin	-2753 May 25 j 05:02	9° 8 34'41	
direct	-2760 Jan 03 j 18:22	4° Y 08'48		behind sun end	-2753 May 25 j 16:50	9° 8 36'25	
				retrograde	-2753 Sep 12 j 02:52	13° 8 55'03	
conjunction	-2760 Apr 21 j 20:42	8° Y 18'51	0°-31'-19	opposition	-2753 Nov 25 j 00:55	11° 8 52'40	0°-7'-27
minimum elong	-2760 Apr 21 j 20:42	8° Y 18'52	0°31'18	min. Earth dist.	-2753 Nov 25 j 21:47	11° 8 50'23	17.69873 AU
max. Earth dist.	-2760 Apr 21 j 11:24		20.19189 AU	direct	-2752 Feb 08 j 04:14	9° 8 48'17	
retrograde	-2760 Aug 10 j 14:22			max. Earth dist.	-2752 May 28 j 10:54	14° 8 07'05	19.66816 AU
opposition	-2760 Oct 24 j 15:46	10° Ƴ 30'51					
min. Earth dist.	-2760 Oct 25 j 00:09		18.15799 AU	conjunction	-2752 May 29 j 12:31	14° 8 10'59	0°-4'-53
direct	-2759 Jan 07 j 08:31	8° Y 29'10		minimum elong	-2752 May 29 j 12:31	14° 8 10'59	0°04'50
				behind sun begin	-2752 May 29 j 05:54		
conjunction	-2759 Apr 26 j 16:40	12° Y 40′50		behind sun end	-2752 May 29 j 19:08		
minimum elong	-2759 Apr 26 j 16:41	12° Y 40′50			-2752 Jun 11 j 23:18		
max. Earth dist.	-2759 Apr 26 j 04:21		20.12447 AU	retrograde	-2752 Sep 16 j 01:24		
retrograde	-2759 Aug 15 j 06:12	16° Y 55'36		opposition	-2752 Nov 28 j 18:49		
opposition	-2759 Oct 29 j 04:30			min. Earth dist.	-2752 Nov 29 j 16:00		17.63839 AU
min. Earth dist.	-2759 Oct 29 j 15:24		18.09088 AU		-2751 Jan 05 j 11:41		
direct	-2758 Jan 11 j 21:29	12° Y ′51′37		direct	-2751 Feb 12 j 02:00		
					-2751 Mar 21 j 06:04	15° 8	
conjunction	-2758 May 01 j 13:32		0°-25'-36				
minimum elong	-2758 May 01 j 13:32			conjunction	-2751 Jun 03 j 14:39		
max. Earth dist.	-2758 May 01 j 00:08		20.05759 AU	minimum elong	-2751 Jun 03 j 14:39		0°01'02
retrograde	-2758 Aug 20 j 01:02			behind sun begin	-2751 Jun 03 j 07:52		
opposition	-2758 Nov 02 j 17:53			behind sun end	-2751 Jun 03 j 21:26		
min. Earth dist.	-2758 Nov 03 j 05:36		18.02417 AU	max. Earth dist.	-2751 Jun 02 j 12:09		19.60924 AU
direct	-2757 Jan 16 j 13:16	17° 'Y' 16'12		asc. node	-2751 Sep 14 j 09:48		
		- 4 000 -		retrograde	-2751 Sep 20 j 21:30		
conjunction	-2757 May 06 j 11:21			opposition	-2751 Dec 03 j 13:46		
minimum elong	-2757 May 06 j 11:21			min. Earth dist.	-2751 Dec 04 j 12:48		17.58129 AU
max. Earth dist.	-2757 May 05 j 19:01		19.99101 AU	direct	-2750 Feb 16 j 22:01	19° 8 00'55	
retrograde	-2757 Aug 24 j 18:32						
opposition	-2757 Nov 07 j 08:07	23 ~Y ′45'36	0~-23'-9	conjunction	-2750 Jun 08 j 16:55	23° 8 26'22	0~02'48

•	ical year style is used: The		•		2751 BCE in historical of	, .	
minimum elong	-2750 Jun 08 j 16:56	-		minimum elong	-2743 Jul 12 j 19:13		
behind sun begin	-2750 Jun 08 j 10:10			max. Earth dist.	-2743 Jul 11 j 14:50		
behind sun end	-2750 Jun 08 j 23:41				-2743 Sep 13 j 20:11	0ಂ ತಾ	
max. Earth dist.	-2750 Jun 07 j 12:59		19.55408 AU	retrograde	-2743 Oct 28 j 16:34	0° © 55'19	
retrograde	-2750 Sep 25 j 20:33	27° 8 47'38		•	-2743 Dec 13 j 21:43	30°RⅡ	
opposition	-2750 Dec 08 j 09:14	25° 8 44'57	0°05'09	opposition	-2742 Jan 09 j 22:14	28° Ⅱ 53'06	0°32'45
min. Earth dist.	-2750 Dec 09 j 08:14	25° 8 42'26	17.52827 AU	min. Earth dist.	-2742 Jan 10 j 22:54	28° ∏ 50′25	17.30418 AU
direct	-2749 Feb 21 j 21:23	23° 8 39'27		direct	-2742 Mar 27 j 05:14	26° Ⅱ 46'37	
					-2742 Jun 26 j 15:41	0∘ ©	
conjunction	-2749 Jun 13 j 19:54	28° 8 06'10	0°06'35				
minimum elong	-2749 Jun 13 j 19:54	28° 8 06'10	0°06'39	conjunction	-2742 Jul 17 j 23:18	1° © 19'27	0°30'55
behind sun begin	-2749 Jun 13 j 13:34	28° 8 05'13		minimum elong	-2742 Jul 17 j 23:18	1° © 19'27	0°31'00
behind sun end	-2749 Jun 14 j 02:14	28° 8 07'07		max. Earth dist.	-2742 Jul 16 j 18:18	1° © 14'53	19.29750 AU
max. Earth dist.	-2749 Jun 12 j 16:00		19.50319 AU	retrograde	-2742 Nov 02 j 17:15	5° © 43'05	
	-2749 Jul 15 j 12:15	Π °0		opposition	-2741 Jan 14 j 23:16	3° 5 40'58	0°36'04
retrograde	-2749 Sep 30 j 17:29	2° Ⅱ 27'54		min. Earth dist.	-2741 Jan 16 j 00:07	3° © 38'15	17.29296 AU
opposition	-2749 Dec 13 j 05:28	0° Ⅱ 25′12		direct	-2741 Apr 01 j 08:17	1° 9 34'26	
min. Earth dist.	-2749 Dec 14 j 05:49		17.47987 AU	max. Earth dist.	-2741 Jul 21 j 23:38	6° © 03'12	19.28862 AU
	-2749 Dec 22 j 20:55						
direct	-2748 Feb 26 j 19:10	_		conjunction	-2741 Jul 23 j 03:28	6° © 07'35	
	-2748 Apr 30 j 10:47	Π °0		minimum elong	-2741 Jul 23 j 03:28	6° ॐ 07'35	0°33'50
				retrograde	-2741 Nov 07 j 18:48	10° © 31'09	
conjunction	-2748 Jun 17 j 23:08	2° Ⅱ 47'19		opposition	-2740 Jan 20 j 00:37	8°529'08	0°39'07
minimum elong	-2748 Jun 17 j 23:09	2° Ⅱ 47'19	0°10'24	min. Earth dist.	-2740 Jan 21 j 00:35		17.28637 AU
behind sun begin	-2748 Jun 17 j 17:52	2° Ⅱ 46'31		direct	-2740 Apr 05 j 12:05	6°9522'36	
behind sun end	-2748 Jun 18 j 04:25	2° ∏ 48'06		max. Earth dist.	-2740 Jul 26 j 03:36	10° © 51'31	19.28445 AU
max. Earth dist.	-2748 Jun 16 j 17:49		19.45738 AU				
retrograde	-2748 Oct 04 j 17:07	7° Ⅱ 09'31		conjunction	-2740 Jul 27 j 07:18		
opposition	-2748 Dec 17 j 02:29	5° Ⅱ 06'48		minimum elong	-2740 Jul 27 j 07:18		0°36'28
min. Earth dist.	-2748 Dec 18 j 02:34		17.43680 AU	retrograde	-2740 Nov 11 j 19:16		
direct	-2747 Mar 02 j 19:50	3° Ⅱ 00'46		opposition	-2739 Jan 24 j 02:33		0°41'54
max. Earth dist.	-2747 Jun 21 j 22:13	7°Щ25'22	19.41698 AU	min. Earth dist.	-2739 Jan 25 j 02:38		17.28476 AU
				direct	-2739 Apr 10 j 15:46		
conjunction	-2747 Jun 23 j 02:44	7° Ⅱ 29'47	0°14'02	max. Earth dist.	-2739 Jul 31 j 08:08	15° © 39'54	19.28539 AU
minimum elong	-2747 Jun 23 j 02:43	7° Ⅱ 29'47	0°14'07				
behind sun begin	-2747 Jun 22 j 23:34	7° Ⅱ 29'18		conjunction	-2739 Aug 01 j 10:35		
behind sun end	-2747 Jun 23 j 05:52	7° Ⅱ 30'16		minimum elong	-2739 Aug 01 j 10:35		0°38'48
retrograde	-2747 Oct 09 j 15:22		0015120	retrograde	-2739 Nov 16 j 20:13		0044100
opposition	-2747 Dec 22 j 00:18	9° Ⅱ 49'44		opposition	-2738 Jan 29 j 04:37		
min. Earth dist.	-2747 Dec 23 j 01:05		17.39927 AU	min. Earth dist.	-2738 Jan 30 j 03:02		17.28819 AU
direct	-2746 Mar 07 j 19:49	7° II 43'32	10.20220.444	direct	-2738 Apr 15 j 20:50	12,628,21	
max. Earth dist.	-2746 Jun 27 j 00:44	12°Щ08′55	19.38238 AU		2720 4 06:12.20	200621156	00.40140
	2746 1 20:06 20	120 T 12122	0017140	conjunction	-2738 Aug 06 j 13:30		0°40'49
conjunction	-2746 Jun 28 j 06:28			minimum elong	-2738 Aug 06 j 13:30		0°40'54
minimum elong	-2746 Jun 28 j 06:28		0°17'44	max. Earth dist.	-2738 Aug 05 j 12:13		19.29148 AU
retrograde	-2746 Oct 14 j 15:11		0021120	retrograde	-2738 Nov 21 j 19:22		0046122
opposition	-2746 Dec 26 j 22:38			opposition min. Earth dist.	-2737 Feb 03 j 06:50 -2737 Feb 04 j 05:12		
min. Earth dist.	-2746 Dec 27 j 23:14		17.30700 AU		,		17.29708 AU
direct	-2745 Mar 12 j 21:26 -2745 Jul 02 j 06:04		10 25242 411	direct	-2737 Apr 21 j 00:58	20 20 40 ⁷ 2/	
max. Earth dist.	-2/45 Jul 02 J 06:04	10°Д34'00	19.33343 AU	agniumation	2727 Aug 11: 15:40	25% 610/10	0942127
conjunction	-2745 Jul 03 j 10:39	160∏50!24	0°21'12	conjunction minimum elong	-2737 Aug 11 j 15:48 -2737 Aug 11 j 15:48		0°42'37 0°42'42
minimum elong	-2745 Jul 03 j 10:39			max. Earth dist.			
· ·	v		0 21 17		-2737 Aug 10 j 15:42		19.30322 AU
retrograde	-2745 Oct 19 j 15:02		0025121	retrograde	-2737 Nov 26 j 19:38		0040122
opposition min. Earth dist.	-2745 Dec 31 j 21:51 -2744 Jan 01 j 22:46			opposition min. Earth dist.	-2736 Feb 08 j 09:10 -2736 Feb 09 j 05:17		0°48'23
min. Earth dist.	-2744 Jan 01 j 22:46 -2744 Mar 16 j 23:27		17.34130 AU	min. Earth dist.	-2/36 Feb 09 j 05:17 -2736 Apr 25 j 06:58		17.31138 AU
			10 22076 AII	direct			
max. Earth dist.	-2744 Jul 06 j 09:10	40°02 يا 40°02	17.327/0 AU		-2736 Aug 14 j 05:52	0 ° Ω	
conjunction	27/// [5] 07:1/-40	210174444	0924126	conjunction	2736 Aug 15: 17:25	00 005127	0011107
conjunction	-2744 Jul 07 j 14:49			conjunction	-2736 Aug 15 j 17:25	0° Ω 05'37	0°44'07
minimum elong	-2744 Jul 07 j 14:49		0°24'41	minimum elong	-2736 Aug 15 j 17:25	0° Ω 05'37	
retrograde	-2744 Oct 23 j 15:21		0020114	max. Earth dist.	-2736 Aug 14 j 19:33		19.32065 AU
opposition	-2743 Jan 04 j 21:41			retrograde	-2736 Nov 30 j 17:55	4° Ω 27'39	0940152
min. Earth dist.	-2743 Jan 05 j 22:39		17.32030 AU	opposition min. Earth dist.	-2735 Feb 12 j 11:45	2° Ω 25'53	0°49'53 17.33209 AU
direct	-2743 Mar 22 j 02:06	Z1 H 39 ZZ			-2735 Feb 13 j 07:20 -2735 Apr 30 j 11:22	2°8 ι 23'46 0° Ω 19'36	17.33209 AU
conjunction	-2743 Jul 12 j 19:13	26°∏21!44	0°27'51	direct	-2133 Apr 30 J 11:22	0 8619.30	
conjunction	-2145 Jul 12 J 19:13	20 Д31 44	0 4/31				

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2735 in astronomical counting style is the year 2736 BCE in historical counting style. 4°Ω51'09 0°45'18 -2735 Aug 20 j 18:17 min. Earth dist. -2727 Mar 23 i 06:38 9° m 53'46 17.68743 AU conjunction -2735 Aug 20 j 18:17 4°Ω51'09 0°45'22 direct -2727 Jun 08 j 09:02 minimum elong 7° m 50'32 max. Earth dist. -2735 Aug 19 j 21:40 4°**Ω**47'53 19.34434 AU -2735 Dec 05 j 17:36 9°**Ω**12'40 -2727 Sep 26 j 21:52 12° m 13'09 retrograde conjunction 0°43'39 -2727 Sep 26 j 21:52 12° mp 13'09 -2734 Feb 17 j 14:05 7°Ω10'58 0°51'02 0°43'41 opposition minimum elong -2727 Sep 26 j 17:48 12° mg 12'31 19.71687 AU -2734 Feb 18 j 06:52 7°**Ω**09'10 17.35888 AU min. Earth dist. max. Earth dist. -2726 Jan 11 j 23:06 16° M 29'16 direct -2734 May 05 j 16:44 5°**Ω**04'52 retrograde -2726 Mar 28 j 02:49 14° m 28'49 opposition 0°47'46 -2726 Mar 28 j 05:06 14° Mp 28'34 17.74683 AU conjunction -2734 Aug 25 j 18:29 9°**Ω**35'39 0°46'11 min. Earth dist. -2734 Aug 25 j 18:29 9°**£**35′39 -2726 Jun 13 j 09:03 12° M 25'31 minimum elong 0°46'14 direct max. Earth dist. -2734 Aug 25 j 00:46 9°**Ω**32'51 19.37423 AU -2734 Dec 10 j 15:33 13°**Ω**56'37 -2726 Oct 01 j 15:38 16° Mp 46'39 0°42'07 retrograde conjunction -2733 Feb 22 j 16:31 11° **Ω**55'03 0°51'50 -2726 Oct 01 j 15:38 16° Mp 46'39 0°42'08 opposition minimum elong -2726 Oct 01 j 14:22 16° Mp 46'27 19.77706 AU min. Earth dist. -2733 Feb 23 j 08:25 11° **Ω**53'21 17.39177 AU max. Earth dist. direct -2733 May 10 j 19:51 9°**Ω**49'11 retrograde -2725 Jan 16 j 18:47 21° Mp 01'56 opposition -2725 Apr 02 j 02:36 19° M 01'35 0°45'54 conjunction -2733 Aug 30 j 17:53 14° **Ω**19'06 0°46'44 min. Earth dist. -2725 Apr 02 j 02:46 19° M 01'34 17.80758 AU minimum elong -2733 Aug 30 j 17:53 14°**Ω**19'06 0°46'48 direct -2725 Jun 18 j 09:51 16° m 58'40 max. Earth dist. -2733 Aug 30 j 01:17 14° Ω16'28 19.41019 AU -2733 Sep 10 j 13:40 15°Ω conjunction -2725 Oct 06 j 08:16 21° mp 18'14 retrograde -2733 Dec 15 j 15:03 $18^{\circ}\Omega$ 39'28 minimum elong -2725 Oct 06 j 08:16 21° Mp 18'14 0°40'22 opposition -2732 Feb 27 j 18:37 $16^{\circ}\Omega$ 38'03 $0^{\circ}52'17$ max. Earth dist. -2725 Oct 06 j 08:18 21° mp 18'14 19.83852 AU min. Earth dist. -2732 Feb 28 i 07:43 16° Ω36'39 17.43051 AU retrograde -2724 Jan 21 j 12:13 25° m 32'41 -2732 Apr 11 j 18:43 15°RΩ opposition -2724 Apr 06 j 01:50 23° m 32'23 0°43'46 direct -2732 May 15 j 00:02 14° **Ω**32'29 min. Earth dist. -2724 Apr 06 j 00:24 23° m 32'32 17.86976 AU -2732 Jun 16 j 11:52 15°Ω direct -2724 Jun 22 j 08:33 21° m 29'50 -2724 Oct 10 j 00:04 25° m 47'47 -2732 Sep 03 j 16:40 19° Ω 01'25 0°47'00 0°38'19 conjunction conjunction -2732 Sep 03 j 16:40 19° Ω 01'25 0°47'03 -2724 Oct 10 j 00:04 25° mp 47'47 0°38'20 minimum elong minimum elong -2732 Sep 03 j 03:18 18° Ω59'19 19.45166 AU -2724 Oct 10 j 02:54 25° m 48'14 19.90143 AU max. Earth dist. max. Earth dist. -2732 Dec 19 j 12:42 23° Ω 21'10 -2723 Jan 18 j 02:18 0∘∙თ retrograde -2731 Mar 03 j 20:50 21°**Ω**19'56 0°52'22 -2723 Jan 25 j 06:33 0°**ഫ**01'22 opposition retrograde -2723 Feb 01 j 09:47 30°R M -2731 Mar 04 j 08:47 21° **Ω**18'40 17.47442 AU min. Earth dist. -2731 May 20 j 02:03 19°**Ω**14'43 -2723 Apr 11 j 00:17 28° M 01'08 0°41'23 direct opposition -2723 Apr 10 j 20:14 28° M 01'33 17.93326 AU min. Earth dist. -2731 Sep 08 j 14:21 23° Ω 42'34 0°46'56 -2723 Jun 27 j 08:08 25° m 58'55 conjunction direct -2731 Sep 08 j 14:21 23° Ω 42'34 0°46'58 -2723 Oct 10 j 11:41 minimum elong 0∘**⊽** max. Earth dist. -2731 Sep 08 j 02:05 23°**Ω**40'38 19.49800 AU retrograde -2731 Dec 24 j 11:40 28°**Ω**01'40 conjunction -2723 Oct 14 j 14:42 0°**Ω**15'14 0°36'05 opposition -2730 Mar 08 j 22:41 $26^{\circ}\Omega00'36$ $0^{\circ}52'07$ minimum elong -2723 Oct 14 j 14:42 0° **2**15'14 0°36'06 min. Earth dist. -2730 Mar 09 j 08:05 $25^{\circ}\Omega$ 59'37 17.52288 AU max. Earth dist. -2723 Oct 14 j 19:17 0°**2**15'56 19.96567 AU direct -2730 May 25 j 04:55 23°**Ω**55'45 retrograde -2722 Jan 29 j 21:51 4°**£**27'57 -2722 Apr 15 j 22:03 2°**£**27'45 0°38'46 opposition -2730 Sep 13 j 11:35 28° **Q**22'26 0°46'34 min. Earth dist. -2722 Apr 15 j 16:32 2°**2**28'19 17.99834 AU conjunction -2730 Sep 13 j 11:35 28° **Q**22'26 0°46'36 direct -2722 Jul 02 j 04:27 0°**£**25'53 minimum elong -2730 Sep 13 j 02:29 $28^{\circ}\Omega$ 21'01 19.54838 AU max. Earth dist. -2730 Oct 09 i 22:49 -2722 Oct 19 i 04:33 0° m conjunction 4°**£**40'35 0°33'39 -2730 Dec 29 i 08:48 retrograde 2° m 40'49 minimum elong -2722 Oct 19 i 04:33 4°**£**40'35 0°33'38 4°**2**41'41 20.03151 AU opposition -2729 Mar 14 j 00:13 0°m/39'58 0°51'31 max. Earth dist. -2722 Oct 19 i 11:46 min. Earth dist. -2729 Mar 14 i 08:18 0° 17.57491 AU retrograde -2721 Feb 03 i 14:31 8°**£**52'25 -2729 Mar 30 i 01:48 30° R Ω opposition -2721 Apr 20 j 18:50 6°**£**52'17 0°35'57 direct -2729 May 30 j 06:17 $28^{\circ}\Omega$ 35'30 min. Earth dist. -2721 Apr 20 j 10:21 6°**2**53'10 18.06487 AU -2729 Jul 27 j 10:02 direct -2721 Jul 07 j 01:53 4°**£**50'48 0°m conjunction -2729 Sep 18 j 07:51 3° m 00'55 0°45'53 conjunction -2721 Oct 23 j 17:30 9°**Ω**03'52 0°31'03 minimum elong -2729 Sep 18 j 07:51 3°m00'55 0°45'54 minimum elong -2721 Oct 23 j 17:30 9°**₽**03'52 0°31'02 -2721 Oct 24 j 02:41 max. Earth dist. -2729 Sep 17 j 23:41 2° m 59'38 19.60205 AU max. Earth dist. 9°**£**05'16 20.09881 AU retrograde -2728 Jan 03 j 06:33 7° m 18'35 retrograde -2720 Feb 08 j 04:36 13°**♀**14'52 -2728 Mar 18 j 01:33 5° m 17'52 0°50'35 -2720 Apr 24 j 15:12 11°**⊆**14'49 opposition opposition 0°32'57 -2728 Mar 18 j 07:26 5° Mp 17'15 17.63004 AU min. Earth dist. -2720 Apr 24 j 05:19 11°**£**15'50 18.13299 AU min. Earth dist. -2728 Jun 03 j 07:50 3°M 13'48 direct -2720 Jul 10 j 19:50 direct 9°**₽**13'44 -2720 Oct 27 j 05:33 13°**2**25'12 conjunction -2728 Sep 22 j 03:19 7° m 37'51 0°44'55 conjunction 0°28'17 minimum elong -2728 Sep 22 j 03:19 7° m/37'51 0°44'56 minimum elong -2720 Oct 27 j 05:33 13°**Ω**25'12 0°28'16 max. Earth dist. -2728 Sep 21 j 22:14 7° **m** 37'04 19.65843 AU max. Earth dist. -2720 Oct 27 j 17:08 13°**Ω**26'57 20.16760 AU

retrograde

opposition

-2719 Feb 11 j 20:27 17° **2**35'23

-2719 Apr 29 j 10:38 15°**♀**35'27

0°29'47

-2727 Jan 07 j 03:10 11° Mp 54'45

9° m 54'12 0°49'20

-2727 Mar 23 j 02:32

retrograde

opposition

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 13 Attention, astronomical year style is used: The year -2719 in astronomical counting style is the year 2720 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -2719	in astronomical cou	inting style is the year	2720 BCE in historical of	counting style	
min. Earth dist.	-2719 Apr 28 j 21:40	15° ≏ 36'46	18.20218 AU	min. Earth dist.	-2712 May 29 j 08:47	15°M14'22	18.66208 AU
direct	-2719 Jul 15 j 14:35	13° ≏ 34'46		opposition	-2712 May 30 j 06:43	15°ML12'10	0°04'41
					-2712 Jun 04 j 08:03	15°RM	
conjunction	-2719 Oct 31 j 16:54	17° ≏ 44'40	0°25'23	direct	-2712 Aug 14 j 19:27		
minimum elong	-2719 Oct 31 j 16:54				-2712 Oct 20 j 02:59	15°M₁	
max. Earth dist.	-2719 Nov 01 j 06:29		20.23712 AU				
retrograde	-2718 Feb 16 j 09:42			conjunction	-2712 Nov 29 j 06:36		
opposition	-2718 May 04 j 05:18			minimum elong	-2712 Nov 29 j 06:36		0°02'33
min. Earth dist.	-2718 May 03 j 15:25		18.27198 AU	behind sun begin	-2712 Nov 29 j 00:04		
direct	-2718 Jul 20 j 06:31	17° £ 54'00		behind sun end	-2712 Nov 29 j 13:07		20 (00,00 17)
. ,.	2710 N 05 : 02 22	220 0 02121	0022121	max. Earth dist.	-2712 Nov 30 j 05:38		20.689/8 AU
conjunction	-2718 Nov 05 j 03:33			retrograde	-2711 Mar 18 j 02:34		0900157
minimum elong max. Earth dist.	-2718 Nov 05 j 03:33 -2718 Nov 05 j 18:59			opposition min. Earth dist.	-2711 Jun 03 j 20:21 -2711 Jun 02 j 20:36		
retrograde	-2717 Feb 21 j 00:47		20.30093 AU	direct	-2711 Juli 02 j 20.36 -2711 Aug 19 j 08:19		18./10/3 AU
opposition	-2717 New 21 j 00:47		0.53105	desc. node	-2711 Aug 19 j 08.19 -2711 Sep 03 j 17:26		
min. Earth dist.	-2717 May 08 j 25:13			uese. Houe	-2/11 Sep 05 j 17.20	17 1162730	
direct	-2717 Jul 24 j 23:14		10.54150 AC	conjunction	-2711 Dec 03 j 13:20	21°M.20'42	0°00'-50
ancet	2/1/ Jul 2+ j 25.14	22 -112)		minimum elong	-2711 Dec 03 j 13:20		0°00'55
conjunction	-2717 Nov 09 j 13:23	26° Ω 18'21	0°19'13	behind sun begin	-2711 Dec 03 j 06:48		0 0000
minimum elong	-2717 Nov 09 j 13:23			behind sun end	-2711 Dec 03 j 19:51		
max. Earth dist.	-2717 Nov 10 j 06:44			max. Earth dist.	-2711 Dec 04 j 13:43		20.74255 AU
man. Barur dige.	-2716 Jan 24 j 11:34	0°M	20.5 / 010 110	retrograde	-2710 Mar 22 j 11:35		20.7.200110
retrograde	-2716 Feb 25 j 13:14	0°M26'14		min. Earth dist.	-2710 Jun 07 j 09:39		18.76784 AU
č	-2716 Mar 29 j 14:42			opposition	-2710 Jun 08 j 09:10		
opposition	-2716 May 12 j 16:41	28° ≏ 26'41	0°19'29	direct	-2710 Aug 23 j 18:01		
min. Earth dist.	-2716 May 11 j 23:23	28° ≏ 28'26	18.41027 AU		0 3		
direct	-2716 Jul 28 j 13:43	26° ≙ 27'18		conjunction	-2710 Dec 07 j 19:28	25°M25'40	0°-4'-14
	-2716 Nov 03 j 20:04	0°M		minimum elong	-2710 Dec 07 j 19:28	25°M25'40	0°04'19
				behind sun begin	-2710 Dec 07 j 13:02	25°M24'45	
conjunction	-2716 Nov 12 j 22:44	0°M32'42	0°15'59	behind sun end	-2710 Dec 08 j 01:54	25°M26'35	
minimum elong	-2716 Nov 12 j 22:45	0°M32'42	0°15'58	max. Earth dist.	-2710 Dec 08 j 20:18	25°M29'18	20.79204 AU
behind sun begin	-2716 Nov 12 j 21:23	0°M32'30		retrograde	-2709 Mar 26 j 22:18	29°M29'08	
behind sun end	-2716 Nov 13 j 00:06	0° ™ 32'54		opposition	-2709 Jun 12 j 21:17		
max. Earth dist.	-2716 Nov 13 j 17:28	0°M35'30	20.44413 AU	min. Earth dist.	-2709 Jun 11 j 20:02	27°M32'25	18.81578 AU
retrograde	-2715 Mar 01 j 03:44	4° ™ 39′52		direct	-2709 Aug 28 j 05:20	25°M32'36	
opposition	-2715 May 17 j 09:09	2° ™ 40′26					
min. Earth dist.	-2715 May 16 j 13:23		18.47738 AU	conjunction	-2709 Dec 12 j 01:06		
direct	-2715 Aug 02 j 04:58	0°M41'27		minimum elong	-2709 Dec 12 j 01:06		0°07'36
		10300 1 = 1 = 5		behind sun begin	-2709 Dec 11 j 19:08	29°M28'24	
conjunction	-2715 Nov 17 j 07:30	4°M45'26	0°12'42	behind sun end	-2709 Dec 12 j 07:03		
minimum elong	-2715 Nov 17 j 07:30	4°M45'26	0°12'39	max. Earth dist.	-2709 Dec 13 j 03:29		20.83836 AU
behind sun begin	-2715 Nov 17 j 03:15	4°M44'49		. 1	-2709 Dec 20 j 20:09	0°⊀ 30 ₹ 3301.5	
behind sun end max. Earth dist.	-2715 Nov 17 j 11:46	4°M46'03	20.51004 ATT	retrograde min. Earth dist.	-2708 Mar 30 j 06:57 -2708 Jun 15 j 07:40	3° ₹ 32'15	18.86076 AU
	-2715 Nov 18 j 03:49 -2714 Mar 05 j 14:54	8°M51'56	20.51004 AU		,	1° ∡ °33′30′	0°-10'-6
retrograde min. Earth dist.	-2714 Mar 03 j 14.34 -2714 May 21 j 05:12		18.54211 AU	opposition	-2708 Jun 16 j 08:51 -2708 Jul 31 j 01:35		0 -10 -0
opposition	-2714 May 21 j 03:12	6°M52'35	0°12'10	direct	-2708 Aug 31 j 13:55	29°M35'53	
direct	-2714 Aug 06 j 18:00	4°M53'59	0 12 10	uncet	-2708 Oct 01 j 08:48	0° ⊼ ¹	
311001	2/11/14g 00 j 10.00	1 11000 07			2,00 000 01 J 00.40	~ ^	
conjunction	-2714 Nov 21 j 15:42	8°M56'35	0°09'22	conjunction	-2708 Dec 15 j 06:30	3° ∡ ³31'34	0°-10'-45
minimum elong	-2714 Nov 21 j 15:42	8°M56'35	0°09'18	minimum elong	-2708 Dec 15 j 06:29	3° × ³ 1'34	0°10'50
behind sun begin	-2714 Nov 21 j 10:11	8°M55'47	0 07 10	behind sun begin	-2708 Dec 15 j 01:27	3° ∡ ³30'51	0 1000
behind sun end	-2714 Nov 21 j 21:14	8°M57'23		behind sun end	-2708 Dec 15 j 11:32	3° ₹ ³32'17	
max. Earth dist.	-2714 Nov 22 j 12:49		20.57332 AU	max. Earth dist.	-2708 Dec 16 j 09:10		20.88199 AU
retrograde	-2713 Mar 10 j 04:26	13°M02'25		retrograde	-2707 Apr 03 j 16:49	7° ∡ ³34'09	
opposition	-2713 May 26 j 16:09	11°M03'09	0°08'26	opposition	-2707 Jun 20 j 19:28	5° ∡ ³34'53	0°-13'-39
min. Earth dist.	-2713 May 25 j 18:08		18.60381 AU	min. Earth dist.	-2707 Jun 19 j 16:46	5° ∡ ³37'33	18.90306 AU
direct	-2713 Aug 11 j 08:03	9° M 04'53		direct	-2707 Sep 04 j 23:06	3° ∡ ³37'59	
aoniunation	2712 Nav. 25 : 22-27	120 M 0/111	0.000	conjunction	2707 Dec. 10 : 11:20	70.722150	00 121 55
conjunction	-2713 Nov 25 j 23:27 -2713 Nov 25 j 23:28	13°M06'11 13°M06'11	0°06'00 0°05'57	conjunction minimum elong	-2707 Dec 19 j 11:38 -2707 Dec 19 j 11:38	7° ₹ 32'50 7° ₹ 32'50	0°-13'-55 0°14'00
minimum elong behind sun begin	-2713 Nov 25 j 23:28 -2713 Nov 25 j 17:13	13°M05'17	0 0331	behind sun begin	-2707 Dec 19 j 11:38 -2707 Dec 19 j 08:13	7° × '32'30' 7° × '32'21	0 1400
behind sun end	-2713 Nov 26 j 05:42	13°M07'05		behind sun begin	-2707 Dec 19 j 08.13 -2707 Dec 19 j 15:03	7° × 32 21	
max. Earth dist.	-2713 Nov 26 j 21:59		20.63327 AU	max. Earth dist.	-2707 Dec 19 j 15:36		20.92274 AU
man, Darui dist.	-2713 Nov 20 j 21:39 -2713 Dec 29 j 06:00	15°M	20.03327710	retrograde	-2706 Apr 08 j 00:56	11° × ⁷ 35'03	20.72217 AU
retrograde	-2712 Mar 13 j 14:23			min. Earth dist.	-2706 Jun 24 j 03:11		18.94241 AU
		20					

•	omena of Uranus fi		•				age 14
Attention, astronom	ical year style is used: T	-	in astronomical cou	unting style is the year			
opposition	-2706 Jun 25 j 05:40		0°-17'-7	min. Earth dist.	-2698 Jul 26 j 23:11		19.11015 AU
direct	-2706 Sep 09 j 06:43	7° ∡ ³39'08		direct	-2698 Oct 11 j 06:27	9° පි 29'00	
conjunction	-2706 Dec 23 j 16:24			conjunction	-2697 Jan 24 j 08:26		
minimum elong	-2706 Dec 23 j 16:25	11° ∡ ³33'12	0°17'06	minimum elong	-2697 Jan 24 j 08:26		
max. Earth dist.	-2706 Dec 24 j 20:22	11° ∡ ³37'15	20.96064 AU	max. Earth dist.	-2697 Jan 25 j 10:03		21.10897 AU
retrograde	-2705 Apr 12 j 10:19	15° ∡ ³35′08		retrograde	-2697 May 15 j 02:47	17° る 21'38	
min. Earth dist.	-2705 Jun 28 j 11:33	13° ∡ ³38'42	18.97875 AU	min. Earth dist.	-2697 Jul 31 j 06:27	15° る 24'43	19.10731 AU
opposition	-2705 Jun 29 j 15:18	13° ∡ ³35′56	0°-20'-30	opposition	-2697 Aug 01 j 06:16	15° る 22'20	0°-42'-35
direct	-2705 Sep 13 j 14:10	11° ∡ ³39'27		direct	-2697 Oct 15 j 11:26	13° る 26'23	
conjunction	-2705 Dec 27 j 21:12	15° ∡ ³32'51	0°-20'-1	conjunction	-2696 Jan 28 j 14:09	17° る 17'37	0°-39'-26
minimum elong	-2705 Dec 27 j 21:12	15° ∡ ³32'51	0°20'07	minimum elong	-2696 Jan 28 j 14:08	17° る 17'37	0°39'31
max. Earth dist.	-2705 Dec 29 j 02:15	15° ∡ ³37′03	20.99523 AU	max. Earth dist.	-2696 Jan 29 j 15:41		21.10352 AU
retrograde	-2704 Apr 15 j 17:58	19° ∡ ³34'34		retrograde	-2696 May 18 j 09:35		
min. Earth dist.	-2704 Jul 01 j 21:14	17° ∡ ³38′08	19.01162 AU	opposition	-2696 Aug 04 j 12:44		
opposition	-2704 Jul 03 j 00:30	17° ∡ ³35′24	0°-23'-46	min. Earth dist.	-2696 Aug 03 j 14:13	19° る 21'59	19.09945 AU
direct	-2704 Sep 16 j 20:56	15° ∡ ³39'07		direct	-2696 Oct 18 j 16:06	17° る 23'39	
conjunction	-2704 Dec 31 j 01:54	19° ∡ ³31'57	0°-22'-56	conjunction	-2695 Jan 31 j 20:02	21° る 14'59	0°-41'-6
minimum elong	-2704 Dec 31 j 01:54	19° ∡ ³31'57	0°23'01	minimum elong	-2695 Jan 31 j 20:02	21° る 14'59	0°41'13
max. Earth dist.	-2703 Jan 01 j 06:31	19° ∡ ³36′05	21.02631 AU	max. Earth dist.	-2695 Feb 01 j 19:57	21° る 18'23	21.09349 AU
retrograde	-2703 Apr 20 j 03:21	23° х 33'30		retrograde	-2695 May 22 j 18:13	25° ට 16'41	
min. Earth dist.	-2703 Jul 06 j 05:14	21° ₹ ³37'10	19.04069 AU	opposition	-2695 Aug 08 j 19:01	23° る 17'08	0°-46'-16
opposition	-2703 Jul 07 j 09:11	21° ∡ ³34′23	0°-26'-55	min. Earth dist.	-2695 Aug 07 j 21:04	23° る 19'21	19.08726 AU
direct	-2703 Sep 21 j 03:19	19° ∡ ³38'15		direct	-2695 Oct 22 j 20:47	21° る 20'55	
conjunction	-2702 Jan 04 j 06:43	23° ∡ ³30'38	0°-25'-43	conjunction	-2694 Feb 05 j 02:14	25° る 12'28	0°-42'-35
minimum elong	-2702 Jan 04 j 06:43	23° ∡ ³30'38	0°25'50	minimum elong	-2694 Feb 05 j 02:14	25° る 12'28	0°42'40
max. Earth dist.	-2702 Jan 05 j 11:59	23° х 34′50	21.05309 AU	max. Earth dist.	-2694 Feb 06 j 02:00	25° ට 15'51	21.07912 AU
retrograde	-2702 Apr 24 j 10:19	27° ∡ °32′02		retrograde	-2694 May 27 j 01:28	29° る 14'24	
opposition	-2702 Jul 11 j 17:25	25° ∡ ³32'58	0°-29'-56	min. Earth dist.	-2694 Aug 12 j 04:22	27° ට 16'51	19.07094 AU
min. Earth dist.	-2702 Jul 10 j 14:23			opposition	-2694 Aug 13 j 01:06		
direct	-2702 Sep 25 j 09:10			direct	-2694 Oct 27 j 01:02		
	1 7				J		
conjunction	-2701 Jan 08 j 11:33	27° ∡ °28'59	0°-28'-23	conjunction	-2693 Feb 09 j 08:45	29° ට 10'15	0°-43'-52
minimum elong	-2701 Jan 08 j 11:32	27° ∡ °28'59	0°28'29	minimum elong	-2693 Feb 09 j 08:45	29° ට 10'15	0°43'57
max. Earth dist.	-2701 Jan 09 j 15:56	27° ∡ °33'03	21.07533 AU	max. Earth dist.	-2693 Feb 10 j 06:47	29° る 13'23	21.06106 AU
	-2701 Feb 24 j 21:21	0°ರ			-2693 Feb 24 j 00:41	0° ≈	
retrograde	-2701 Apr 28 j 19:54	1° る 30'19		retrograde	-2693 May 31 j 10:31	3°≈12'31	
C	-2701 Jul 03 j 22:50	30°R ✓		min. Earth dist.	-2693 Aug 16 j 11:06	1° ≈ 14'46	19.05108 AU
min. Earth dist.	-2701 Jul 14 j 22:13	29° х 33′59	19.08497 AU	opposition	-2693 Aug 17 j 07:11	1° ≈ 12'44	
opposition	-2701 Jul 16 j 01:25	29° ∡ ³31'16		11	-2693 Sep 18 j 13:07	30°Ŗる	
direct	-2701 Sep 29 j 14:54	27° ∡ ³35'24		direct	-2693 Oct 31 j 05:34	29° ප 16'15	
	-2701 Dec 17 j 18:08	0°ರ			-2693 Dec 11 j 18:15	0° ≈	
	,				j		
conjunction	-2700 Jan 12 j 16:31	1°る27'05	0°-30'-55	conjunction	-2692 Feb 13 j 15:45	3° ≈ 08'31	0°-44'-56
minimum elong	-2700 Jan 12 j 16:31	1°る27'05		minimum elong	-2692 Feb 13 j 15:45	3° ≈ 08'31	0°45'01
max. Earth dist.	-2700 Jan 13 j 21:11		21.09228 AU	max. Earth dist.	-2692 Feb 14 j 13:33		21.03934 AU
retrograde	-2700 May 02 j 02:20	5° ට 28'23		retrograde	-2692 Jun 03 j 18:29	7° ≈ 11'09	
min. Earth dist.	-2700 Jul 18 j 07:10	3°₹31'56	19.09915 AU	opposition	-2692 Aug 20 j 13:16	5° ≈ 11'18	0°-50'-10
opposition	-2700 Jul 19 j 09:09	3° る 29'20		min. Earth dist.	-2692 Aug 19 j 18:29		19.02753 AU
direct	-2700 Oct 02 j 20:11	1°る33'32		direct	-2692 Nov 03 j 09:37	3° ≈ 14'41	
	,				j		
conjunction	-2699 Jan 15 j 21:44	5°₹24'59	0°-33'-18	conjunction	-2691 Feb 16 j 23:17	7° ≈ 07'28	0°-45'-48
minimum elong	-2699 Jan 15 j 21:43	5° ට 24'59		minimum elong	-2691 Feb 16 j 23:17	7° ≈ 07'28	0°45'52
max. Earth dist.	-2699 Jan 17 j 00:59		21.10367 AU	max. Earth dist.	-2691 Feb 17 j 19:02		21.01415 AU
retrograde	-2699 May 06 j 11:41	9° පි 26'17		retrograde	-2691 Jun 08 j 04:13	11°≈10'32	
opposition	-2699 Jul 23 j 16:21	7° る 27'11	0°-38'-4	opposition	-2691 Aug 24 j 19:16	9° ≈ 10'37	0°-51'00
min. Earth dist.	-2699 Jul 22 j 14:44		19.10763 AU	min. Earth dist.	-2691 Aug 24 j 01:31		19.00054 AU
direct	-2699 Oct 07 j 01:29	5° る 31'22		direct	-2691 Nov 07 j 14:17	7°≈13'51	
	· · · · · · · · · · · · · · · · · ·	-					
conjunction	-2698 Jan 20 i 03:08	9° ප 22'42	0°-35'-32	conjunction	-2690 Feb 21 i 07:25	11° ≈ 07'17	0°-46'-26
conjunction minimum elong	-2698 Jan 20 j 03:08 -2698 Jan 20 j 03:08			conjunction minimum elong	-2690 Feb 21 j 07:25 -2690 Feb 21 j 07:25		
·	-2698 Jan 20 j 03:08	9° る 22'42			-2690 Feb 21 j 07:25	11° ≈ 07'17	
minimum elong max. Earth dist.	-2698 Jan 20 j 03:08 -2698 Jan 21 j 06:16	9° る 22'42 9° る 26'34	0°35'36	minimum elong	-2690 Feb 21 j 07:25 -2690 Feb 22 j 02:43	11°≈07'17 11°≈10'02	0°46'31
minimum elong	-2698 Jan 20 j 03:08	9° ප්22'42 9° ප්26'34 13° ප්24'01	0°35'36 21.10912 AU	minimum elong	-2690 Feb 21 j 07:25	11°≈07'17 11°≈10'02 15°≈	0°46'31

Planetary Pheno		2 (00			0 (01 D OF : 1: : : 1		
Attention, astronom	ical year style is used: Th	-	in astronomical cou				
	-2690 Jul 03 j 20:08		10.06050.444	max. Earth dist.	-2682 Mar 27 j 05:04		20.60356 AU
min. Earth dist.	-2690 Aug 28 j 09:15			retrograde	-2682 Jul 16 j 09:05		00 45100
opposition	-2690 Aug 29 j 01:31		0°-51'-36	opposition	-2682 Sep 30 j 12:28		0°-47'00
direct	-2690 Nov 11 j 18:37			min. Earth dist.	-2682 Sep 30 j 10:45		18.5/17/8 AU
	-2689 Feb 23 j 07:05	15° ≈		direct	-2682 Dec 13 j 23:42	13° 米 57'25	
	2600 E-L 25 : 15.57	1500 00007	00 461 51	:	2601 Mar. 21 : 16:27	170 V 50/50	09 411 41
conjunction	-2689 Feb 25 j 15:57			conjunction	-2681 Mar 31 j 16:27		
minimum elong	-2689 Feb 25 j 15:57			minimum elong	-2681 Mar 31 j 16:27		0°41'43
max. Earth dist.	-2689 Feb 26 j 08:57		20.95279 AU	max. Earth dist.	-2681 Mar 31 j 16:23		20.53967 AU
retrograde	-2689 Jun 16 j 23:40		00 511 57	retrograde	-2681 Jul 20 j 22:30		0°-45'-15
opposition	-2689 Sep 02 j 07:59			opposition	-2681 Oct 04 j 21:26		
min. Earth dist.	-2689 Sep 01 j 17:08		18.93326 AU	min. Earth dist.	-2681 Oct 04 j 21:48		18.30/03 AU
direct	-2689 Nov 15 j 23:31	13 ≈13 10		direct	-2681 Dec 18 j 09:16	10 70030	
conjunction	-2688 Mar 01 j 01:32	19° ≈ 10'07	0°-47'-3	conjunction	-2680 Apr 04 j 08:04	22° ¥ 12'31	0°-39'-58
minimum elong	-2688 Mar 01 j 01:32			minimum elong	-2680 Apr 04 j 08:04		
max. Earth dist.	-2688 Mar 01 j 17:42			max. Earth dist.	-2680 Apr 04 j 07:06		
retrograde	-2688 Jun 20 j 09:55		20.91011110	retrograde	-2680 Jul 24 j 11:37		20.17.11.110
opposition	-2688 Sep 05 j 14:31		0°-52'-2	opposition	-2680 Oct 08 j 06:42		0°-43'-14
min. Earth dist.	-2688 Sep 05 j 01:32			min. Earth dist.	-2680 Oct 08 j 08:23		
direct	-2688 Nov 19 j 04:54		10.07037 110	direct	-2680 Dec 21 j 18:57		10.44000 /10
direct	2000 1007 17 1 04.54	1) 1011/32		uncet	2000 Dec 21 j 10.57	22 /(2124	
conjunction	-2687 Mar 05 j 11:45	23°≈13'23	0°-47'00	conjunction	-2679 Apr 09 j 00:20	26°) €26'40	0°-38'-2
minimum elong	-2687 Mar 05 j 11:45		0°47'04	minimum elong	-2679 Apr 09 j 00:20		0°38'03
max. Earth dist.	-2687 Mar 06 j 00:58		20.87512 AU	max. Earth dist.	-2679 Apr 08 j 20:11		20.40763 AU
retrograde	-2687 Jun 24 j 21:10				-2679 Jun 20 j 04:58	0° Υ	
opposition	-2687 Sep 09 j 21:28		0°-51'-52	retrograde	-2679 Jul 29 j 01:58	0° Ƴ 37'50	
min. Earth dist.	-2687 Sep 09 j 10:21				-2679 Sep 06 j 07:10		
direct	-2687 Nov 23 j 10:09			opposition	-2679 Oct 12 j 16:43		0°-40'-59
	,			min. Earth dist.	-2679 Oct 12 j 20:30		18.37411 AU
conjunction	-2686 Mar 09 j 22:43	27°≈17'55	0°-46'-43	direct	-2679 Dec 26 j 05:41		
minimum elong	-2686 Mar 09 j 22:43	27°≈17'55	0°46'47		-2678 Apr 01 j 13:36	$0^{\circ}\Upsilon$	
max. Earth dist.	-2686 Mar 10 j 10:44		20.82927 AU		r . j		
	-2686 Apr 30 j 06:13	0° ∀		conjunction	-2678 Apr 13 j 17:26	0° Ƴ 42'34	0°-35'-53
retrograde				•			
TCHOSTAGE	-2686 Jun 29 i 08:29	1°# 23'55		minimum elong	-2678 Apr 13 i 17:26	0°'Y'42'34	0°35'54
retrograde	-2686 Jun 29 j 08:29 -2686 Aug 30 j 07:05	1°) 23'55 30°R≈		minimum elong max. Earth dist.	-2678 Apr 13 j 17:26 -2678 Apr 13 j 12:33	0° Y 42'34 0° Y 41'51	0°35'54 20.34062 AU
	-2686 Aug 30 j 07:05	30°R ≈	0°-51'-25	max. Earth dist.	-2678 Apr 13 j 12:33		0°35'54 20.34062 AU
opposition	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42	30°R≈ 29°≈23'39		max. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36	0° Υ 41'51 4° Υ 54'33	
opposition min. Earth dist.	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27	30°R≈ 29°≈23'39 29°≈24'37		max. Earth dist. retrograde opposition	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17	0°Y41'51 4°Y54'33 2°Y52'55	20.34062 AU 0°-38'-29
opposition	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42	30°R≈ 29°≈23'39 29°≈24'37		max. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05	0°Y41'51 4°Y54'33 2°Y52'55	20.34062 AU
opposition min. Earth dist.	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54		max. Earth dist. retrograde opposition min. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24	20.34062 AU 0°-38'-29
opposition min. Earth dist.	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54		max. Earth dist. retrograde opposition min. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24	20.34062 AU 0°-38'-29
opposition min. Earth dist. direct	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°升	18.80472 AU 0°-46'-12	max. Earth dist. retrograde opposition min. Earth dist. direct	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31
opposition min. Earth dist. direct	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°¥23'44 1°¥23'44	18.80472 AU 0°-46'-12	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30
opposition min. Earth dist. direct conjunction minimum elong	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°¥23'44 1°¥23'44	18.80472 AU 0°-46'-12 0°46'15	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 11:25	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°¥ 1°¥23'44 1°¥23'44 1°¥24'59	18.80472 AU 0°-46'-12 0°46'15	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'00	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'00	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°¥ 1°¥23'44 1°¥24'59 5°¥30'25 3°¥30'00 3°¥30'44 1°¥31'54	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2676 Jan 04 j 04:54	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Mul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°¥ 1°¥23'44 1°¥23'44 1°¥24'59 5°¥30'25 3°¥30'40 3°¥30'44 1°¥31'54	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2677 Oct 21 j 21:34 -2676 Jan 04 j 04:54 -2676 Apr 22 j 06:35	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°¥ 1°¥23'44 1°¥23'44 1°¥24'59 5°¥30'25 3°¥30'00 3°¥30'44 1°¥31'54 5°¥30'49 5°¥30'49	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2677 Oct 21 j 21:34 -2676 Apr 22 j 06:35 -2676 Apr 22 j 06:35	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57
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opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53 -2684 Mar 18 j 06:20 -2684 Jul 07 j 08:17	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°¥23'44 1°¥24'59 5°¥30'25 3°¥30'44 1°¥31'54 5°¥30'49 5°¥30'49 5°¥31'53 9°¥38'10	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28 20.72390 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Apr 18 j 03:24 -2677 Oct 21 j 14:27 -2676 Oct 21 j 21:34 -2676 Apr 22 j 06:35 -2676 Apr 21 j 21:39 -2676 Aug 11 j 00:37	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02 9°Y18'43 13°Y33'45	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57 20.20643 AU
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53 -2684 Mar 18 j 06:20 -2684 Jul 07 j 08:17 -2684 Sep 21 j 19:58	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'44 1°₩31'54 5°₩30'49 5°₩30'49 5°₩30'49 5°₩30'49 5°₩31'53 9°₩38'10 7°₩37'35	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28 20.72390 AU 0°-49'-45	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2676 Jan 04 j 04:54 -2676 Apr 22 j 06:35 -2676 Apr 21 j 21:39 -2676 Aug 11 j 00:37 -2676 Oct 25 j 02:19	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02 9°Y18'43 13°Y33'45 11°Y31'57	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57 20.20643 AU 0°-32'-48
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53 -2684 Mar 18 j 06:20 -2684 Jul 07 j 08:17 -2684 Sep 21 j 19:58 -2684 Sep 21 j 14:38	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'44 1°₩31'54 5°₩30'49 5°₩30'49 5°₩31'53 9°₩38'10 7°₩37'35 7°₩38'08	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28 20.72390 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2676 Oct 21 j 21:34 -2676 Apr 22 j 06:35 -2676 Apr 22 j 06:35 -2676 Apr 21 j 21:39 -2676 Aug 11 j 00:37 -2676 Oct 25 j 02:19 -2676 Oct 25 j 10:32	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02 9°Y18'43 13°Y33'45 11°Y31'57 11°Y31'04	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57 20.20643 AU 0°-32'-48
opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53 -2684 Mar 18 j 06:20 -2684 Jul 07 j 08:17 -2684 Sep 21 j 19:58	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'44 1°₩31'54 5°₩30'49 5°₩30'49 5°₩30'49 5°₩30'49 5°₩31'53 9°₩38'10 7°₩37'35	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28 20.72390 AU 0°-49'-45	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Apr 18 j 03:24 -2677 Aug 07 j 07:51 -2677 Oct 21 j 14:27 -2676 Jan 04 j 04:54 -2676 Apr 22 j 06:35 -2676 Apr 21 j 21:39 -2676 Aug 11 j 00:37 -2676 Oct 25 j 02:19	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02 9°Y18'43 13°Y33'45 11°Y31'57	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57 20.20643 AU 0°-32'-48
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opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. retrograde opposition min. Earth dist. direct	-2686 Aug 30 j 07:05 -2686 Sep 14 j 04:42 -2686 Sep 13 j 19:27 -2686 Nov 27 j 17:04 -2685 Feb 17 j 15:45 -2685 Mar 14 j 10:21 -2685 Mar 14 j 10:21 -2685 Mar 14 j 19:05 -2685 Mar 14 j 19:05 -2685 Jul 03 j 20:14 -2685 Sep 18 j 12:11 -2685 Sep 18 j 05:01 -2685 Dec 01 j 23:21 -2684 Mar 17 j 22:53 -2684 Mar 17 j 22:53 -2684 Mar 18 j 06:20 -2684 Jul 07 j 08:17 -2684 Sep 21 j 19:58 -2684 Sep 21 j 14:38 -2684 Dec 05 j 07:18 -2683 Mar 22 j 12:00 -2683 Mar 22 j 12:01 -2683 Mar 22 j 16:08 -2683 Jul 11 j 20:36 -2683 Sep 26 j 04:00	30°R≈ 29°≈23'39 29°≈24'37 27°≈25'54 0°₩ 1°₩23'44 1°₩23'44 1°₩24'59 5°₩30'25 3°₩30'00 3°₩30'44 1°₩31'54 5°₩30'49	18.80472 AU 0°-46'-12 0°46'15 20.77879 AU 0°-50'-43 18.75198 AU 0°-45'-26 0°45'28 20.72390 AU 0°-49'-45 18.69500 AU 0°-44'-25 0°44'28 20.66525 AU 0°-48'-30	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. direct	-2678 Apr 13 j 12:33 -2678 Aug 02 j 16:36 -2678 Oct 17 j 03:17 -2678 Oct 17 j 08:05 -2678 Dec 30 j 17:10 -2677 Apr 18 j 11:25 -2677 Apr 18 j 11:25 -2677 Apr 18 j 03:24 -2677 Apr 18 j 03:24 -2677 Oct 21 j 14:27 -2677 Oct 21 j 21:34 -2676 Apr 22 j 06:35 -2676 Apr 22 j 06:35 -2676 Apr 21 j 21:39 -2676 Aug 11 j 00:37 -2676 Oct 25 j 02:19 -2676 Oct 25 j 02:19 -2675 Apr 27 j 02:27 -2675 Apr 27 j 02:27 -2675 Apr 26 j 14:19 -2675 Aug 15 j 16:57 -2675 Oct 29 j 14:58	0°Y41'51 4°Y54'33 2°Y52'55 2°Y52'24 0°Y52'03 5°Y00'18 5°Y00'18 4°Y59'07 9°Y13'10 7°Y11'25 7°Y10'40 5°Y10'12 9°Y20'02 9°Y20'02 9°Y18'43 13°Y33'45 11°Y31'57 11°Y31'04 9°Y30'23 13°Y41'49 13°Y41'49 13°Y40'02 17°Y56'27 15°Y54'35 15°Y53'25	20.34062 AU 0°-38'-29 18.30694 AU 0°-33'-30 0°33'31 20.27350 AU 0°-35'-45 18.23987 AU 0°-30'-56 0°30'57 20.20643 AU 0°-32'-48 18.17271 AU 0°-28'-9 0°28'08 20.13924 AU 0°-29'-37
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Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2674 in astronomical counting style is the year 2675 BCE in historical counting style. -2674 May 01 j 10:10 18°**Υ**03'46 20.07196 AU minimum elong -2667 Jun 03 j 23:22 19°846'30 0°00'36 max. Earth dist. behind sun begin -2674 Aug 20 j 11:29 22°**Υ**21'13 -2667 Jun 03 j 16:36 19°**8**45'29 retrograde -2674 Nov 03 j 04:19 20°Υ 19'18 0°-26'-14 -2667 Jun 04 j 06:08 19°**8**47'30 opposition behind sun end -2674 Nov 03 j 16:11 20°**Υ**18'01 18.03813 AU -2667 Jun 02 j 21:02 19°842'28 19.61654 AU min. Earth dist. max. Earth dist. -2673 Jan 16 j 23:11 18°**Y**17'01 -2667 Aug 06 j 02:03 23°**8**10'22 direct asc. node -2667 Sep 21 j 06:59 24°**8**07'06 retrograde -2673 May 06 j 21:11 22°**Y**31'43 0°-22'-3 -2667 Dec 03 j 23:22 22°**8**04'31 conjunction opposition 0°01'22 -2673 May 06 j 21:11 22°**Υ**31'43 min. Earth dist. -2667 Dec 04 j 22:15 22°802'01 17.58860 AU minimum elong 0°22'02 -2673 May 06 j 04:42 22°**Y**29'15 20.00440 AU -2666 Feb 17 j 07:37 19°**8**59'24 max. Earth dist. direct -2666 Jun 07 j 22:04 24°820'26 19.56145 AU retrograde -2673 Aug 25 j 04:53 26°**Y**48'03 max. Earth dist. opposition -2673 Nov 07 j 18:37 24°**Y**46'03 0°-22'-40 -2673 Nov 08 j 09:12 24°**Y**44'29 17.97053 AU -2666 Jun 09 j 01:40 24°**8**24'40 min. Earth dist. conjunction 0°03'12 -2672 Jan 21 j 14:09 22°**Y**43'22 -2666 Jun 09 j 01:38 24°**8**24'40 direct minimum elong 0°03'15 -2666 Jun 08 j 18:53 24°**8**23'39 behind sun begin conjunction -2672 May 10 j 19:59 26°**Y**'59'42 0°-18'-45 behind sun end -2666 Jun 09 j 08:23 24°**8**25'40 minimum elong -2672 May 10 j 19:59 26°**Y**59'42 0°18'43 retrograde -2666 Sep 26 j 05:31 28°**8**45'51 max. Earth dist. -2672 May 10 j 02:03 26° Υ 57'01 19.93674 AU opposition -2666 Dec 08 j 18:36 26°**8**43'11 0°05'35 -2672 Jul 04 j 22:53 0° 8 min. Earth dist. -2666 Dec 09 j 17:16 26°840'42 17.53579 AU retrograde -2672 Aug 29 j 00:46 1°816'51 direct -2665 Feb 22 j 06:23 24°837'44 -2672 Oct 24 j 12:31 30°R℃ max. Earth dist. -2665 Jun 13 j 00:45 29°800'02 19.51088 AU opposition -2672 Nov 11 j 09:27 29°**Y**′14'46 0°-18'-56 min. Earth dist. -2672 Nov 12 j 00:56 29° γ 13'05 17.90289 AU conjunction -2665 Jun 14 i 04:31 29°**8**04'18 0°06'58 direct $-2671 \text{ Jan } 25 \text{ j } 08:12 \quad 27^{\circ} \Upsilon 11'41$ minimum elong -2665 Jun 14 i 04:30 29°**8**04'18 0°07'02 -2671 Apr 20 j 12:35 0°8 behind sun begin -2665 Jun 13 j 22:15 29°**8**03'22 behind sun end -2665 Jun 14 j 10:45 29°805'15 -2671 May 15 j 19:25 1°**8**29'36 0°-15'-19 -2665 Jun 29 j 07:41 $0^{\circ}\Pi$ conjunction -2671 May 15 j 19:25 1°**8**29'36 0°15'18 -2665 Oct 01 j 03:12 3°**I**I25′59 retrograde minimum elong -2671 May 15 j 17:49 1°**8**29'22 -2665 Dec 13 j 14:51 1°II23'19 0°09'46 behind sun begin opposition -2671 May 15 j 21:01 1°**8**29'50 min. Earth dist. -2665 Dec 14 j 14:55 1°**II**20'41 17.48777 AU behind sun end -2671 May 14 j 22:42 -2664 Jan 17 j 07:46 30°R**♂** 1°**8**26'29 19.86928 AU max. Earth dist. -2671 Sep 02 j 19:22 -2664 Feb 27 j 03:52 29°**8**17'37 5°847'31 retrograde direct -2671 Nov 16 j 01:18 3°**8**45'20 0°-15'-3 -2664 Apr 07 j 13:29 opposition $0^{\circ}\Pi$ -2671 Nov 16 j 19:20 3°**8**43'23 17.83591 AU max. Earth dist. -2664 Jun 17 j 02:36 min. Earth dist. 3°**Ц**40'53 19.46547 AU 1°**8**41'50 -2670 Jan 30 j 00:57 direct -2664 Jun 18 j 07:38 3°**II**45'23 0°10'42 conjunction -2670 May 20 j 19:24 6°**8**01'18 0°-11'-47 -2664 Jun 18 j 07:38 3°**II**45'23 0°10'46 conjunction minimum elong -2670 May 20 j 19:24 6°**8**01'18 0°11'45 -2664 Jun 18 j 02:30 3°**Ⅱ**44'37 minimum elong behind sun begin behind sun begin -2670 May 20 j 14:44 6°800'37 behind sun end -2664 Jun 18 j 12:46 3°**Ⅱ**46′09 behind sun end -2670 May 21 j 00:05 6°802'00 retrograde -2664 Oct 05 j 02:06 8°**Ⅲ**07'33 max. Earth dist. -2670 May 19 j 21:24 5°**8**57'59 19.80288 AU opposition -2664 Dec 17 j 11:41 6°**Ⅲ**04'53 0°13'55 retrograde -2670 Sep 07 j 16:18 10°**8**19'58 min. Earth dist. -2664 Dec 18 j 11:23 6°**Д**02'17 17.44503 AU -2670 Nov 20 j 17:39 8°817'40 0°-11'-3 -2663 Mar 03 j 04:34 3°**I**I58'58 opposition direct min. Earth dist. -2670 Nov 21 j 12:12 8°815'40 17.77021 AU max. Earth dist. -2663 Jun 22 j 06:50 8°**Ⅲ**23'27 19.42532 AU -2669 Feb 03 j 20:32 6°**8**13'45 direct conjunction -2663 Jun 23 j 11:17 8°**II**27'52 0°14'23 -2669 May 25 j 20:11 10°\begin{align*} 334'45 0°-8'-9 \end{align*} -2663 Jun 23 j 11:16 8°**Ⅲ**27'52 conjunction minimum elong 0°14'27 -2669 May 25 j 20:12 10°**8**34'45 -2663 Jun 23 j 08:26 minimum elong behind sun begin 8°**Ⅱ**27'26 -2669 May 25 j 14:11 10°\(233'52\) behind sun begin behind sun end -2663 Jun 23 j 14:07 8°**Ⅱ**28'18 -2669 May 26 j 02:12 10°\(235'38\) behind sun end retrograde -2663 Oct 10 j 00:40 12°**Ц**50'26 max. Earth dist. -2669 May 24 j 20:11 10°831'06 19.73804 AU opposition -2663 Dec 22 i 09:26 10° II 47'51 0° 18'00 retrograde -2669 Sep 12 j 12:16 14° 854'06 min. Earth dist. -2663 Dec 23 j 10:08 10°**Д**45'09 17.40757 AU -2669 Nov 25 j 10:48 12°\(251'42\) 0°-6'-58 direct -2662 Mar 08 j 03:56 8°**Ⅱ**41'46 opposition min. Earth dist. -2669 Nov 26 j 07:42 12°849'25 17.70659 AU max. Earth dist. -2662 Jun 27 j 09:14 13°**Д**07'04 19.39051 AU -2668 Feb 08 j 14:50 10°847'21 direct -2668 May 27 j 05:06 15°**8** conjunction -2662 Jun 28 j 14:57 13°**Ⅲ**11'41 0°17'59 minimum elong -2662 Jun 28 j 14:57 13°**Ⅱ**11'41 0°18'04 conjunction -2668 May 29 j 21:35 15°**8**09'50 0°-4'-27 retrograde -2662 Oct 15 j 00:29 17°**I**I34'38 -2668 May 29 j 21:36 15°**8**09'50 0°04'25 -2662 Dec 27 j 07:47 15° **Д**32'07 0°21'59 minimum elong opposition -2668 May 29 j 14:56 15°**8**08'51 -2662 Dec 28 j 08:18 15°**Ц**29'26 17.37534 AU behind sun begin min. Earth dist. -2668 May 30 j 04:15 15°**8**10'50 direct -2661 Mar 13 j 06:25 13°**Ⅲ**25'53 behind sun end -2668 May 28 j 20:15 15°**8**05'59 19.67575 AU max. Earth dist. retrograde -2668 Sep 16 j 10:12 19°\(29'50\) conjunction -2661 Jul 03 j 19:12 17°**II**56'44 0°21'30 opposition -2668 Nov 29 j 04:38 17°**8**27'20 0°-2'-49 minimum elong -2661 Jul 03 j 19:12 17°**I** 56'44 0°21'34 min. Earth dist. -2668 Nov 30 j 01:41 17°**8**25'02 17.64580 AU max. Earth dist. -2661 Jul 02 j 14:26 17°**I**52'15 19.36064 AU direct -2667 Feb 12 j 11:59 15°**8**22'35 retrograde -2661 Oct 20 j 00:04 22°**Ⅲ**19'56 -2660 Jan 01 j 06:54 20° **1**17'32 0°25'50 opposition -2667 Jun 03 j 23:21 19°**8**46'29 0°00'-39 min. Earth dist. -2660 Jan 02 j 08:05 20° **I**I 14'47 17.34786 AU conjunction

Attention astronom	ical year style is used: Th	10 Mar 2660	in actronomical co	unting style is the year	2661 BCE in historical of	ounting style	· ·
direct	-2660 Mar 17 j 07:52	•	in astronomical co	opposition	-2652 Feb 08 j 17:23		
direct	-2000 Mai 17 J 07.32	10 Щ11 12		min. Earth dist.	-2652 Feb 09 j 13:32		
agniumation	-2660 Jul 07 j 23:26	220T/21/10	0°24'53	direct	-2652 Apr 25 j 15:17		17.30331 AU
conjunction minimum elong	-2660 Jul 07 j 23:26			direct		20 3 2849	
max. Earth dist.	,			Fauth diat	-2652 Jul 30 j 20:48 -2652 Aug 15 j 03:33		10 21450 ATT
	-2660 Jul 06 j 17:24 -2660 Oct 24 j 00:31		19.33333 AU	max. Earth dist.	-2052 Aug 15 J 05:55	0-863/34	19.31459 AU
retrograde	-		0020121	:	2652 A 16:01-22	10 001102	0944107
opposition min. Earth dist.	-2659 Jan 05 j 06:45			conjunction	-2652 Aug 16 j 01:32	1°Ω01'03	0°44'06 0°44'10
	-2659 Jan 06 j 07:52 -2659 Mar 22 j 10:57		17.32318 AU	minimum elong	-2652 Aug 16 j 01:32	1° Ω 01'03 5° Ω 23'07	0-44-10
direct	•		10 21507 ATT	retrograde	-2652 Dec 01 j 02:17		0040152
max. Earth dist.	-2659 Jul 11 j 22:55	27°Щ25′10	19.3150/ AU	opposition	-2651 Feb 12 j 19:56	3° Ω 21'16	
	2650 1 1 12:02 41	270TT20141	0020107	min. Earth dist.	-2651 Feb 13 j 15:25		17.32619 AU
conjunction	-2659 Jul 13 j 03:41	27° Ⅱ 29'41	0°28'06	direct	-2651 Apr 30 j 18:11	1° Ω 14'55	10.22072 ATT
minimum elong	-2659 Jul 13 j 03:41		0°28'10	max. Earth dist.	-2651 Aug 20 j 05:52	5° 8 (43'19	19.33862 AU
	-2659 Aug 24 j 08:04	0.00 0.00			2651 4 21:02:10	50 0 46122	0045116
retrograde	-2659 Oct 29 j 01:20	1°953'12		conjunction	-2651 Aug 21 j 02:19	5° Ω 46'33	0°45'16
•.•	-2658 Jan 06 j 20:17	30°RⅡ	0000101	minimum elong	-2651 Aug 21 j 02:19	5° Ω 46'33	0°45'18
opposition	-2658 Jan 10 j 07:14	29° Ⅱ 50'57		retrograde	-2651 Dec 06 j 02:52		
min. Earth dist.	-2658 Jan 11 j 08:17		17.30698 AU	opposition	-2650 Feb 17 j 22:16	8° Ω 06'27	0°50'59
direct	-2658 Mar 27 j 14:05			min. Earth dist.	-2650 Feb 18 j 14:57		17.35333 AU
	-2658 Jun 10 j 07:49	0°€		direct	-2650 May 06 j 00:26	6° Ω 00′20	
max. Earth dist.	-2658 Jul 17 j 02:16	2°5512'28	19.29920 AU	max. Earth dist.	-2650 Aug 25 j 08:56	10° {\2 8'28	19.36892 AU
conjunction	-2658 Jul 18 j 07:51	2° © 17'07		conjunction	-2650 Aug 26 j 02:41		
minimum elong	-2658 Jul 18 j 07:51	2° © 17'07	0°31'11	minimum elong	-2650 Aug 26 j 02:41		0°46'10
retrograde	-2658 Nov 03 j 01:36	6°≌40'40		retrograde	-2650 Dec 11 j 00:08		
opposition	-2657 Jan 15 j 08:01	4° © 38'28	0°36'17	opposition	-2649 Feb 23 j 00:36		0°51'45
min. Earth dist.	-2657 Jan 16 j 09:08	4° © 35'44	17.29357 AU	min. Earth dist.	-2649 Feb 23 j 16:34	12° Ω 49′08	17.38663 AU
direct	-2657 Apr 01 j 17:04	2° © 31'52		direct	-2649 May 11 j 03:10	10° Ω 45′00	
max. Earth dist.	-2657 Jul 22 j 07:45	7° © 00'27	19.28814 AU		-2649 Aug 27 j 02:32	15° Ω	
				max. Earth dist.	-2649 Aug 30 j 09:45	15° Ω 12'31	19.40521 AU
conjunction	-2657 Jul 23 j 12:00	7° © 04'54	0°33'56				
minimum elong	-2657 Jul 23 j 12:00	7° 5 04'54	0°34'01	conjunction	-2649 Aug 31 j 02:15	15° Ω 15′07	0°46'39
retrograde	-2657 Nov 08 j 03:11	11° 5 28'22		minimum elong	-2649 Aug 31 j 02:15	15° Ω 15′07	0°46'42
opposition	-2656 Jan 20 j 09:23	9° 5 26'14	0°39'18	retrograde	-2649 Dec 16 j 00:07	19° Ω 35'41	
min. Earth dist.	-2656 Jan 21 j 09:44	9° © 23'35	17.28486 AU	opposition	-2648 Feb 28 j 02:54		0°52'10
direct	-2656 Apr 05 j 21:42	7° © 19'36		min. Earth dist.	-2648 Feb 28 j 16:03	17° Ω 32'55	17.42554 AU
max. Earth dist.	-2656 Jul 26 j 11:26	11° 5 548'18	19.28198 AU	direct	-2648 May 15 j 07:58	15° Ω 28'49	
				max. Earth dist.	-2648 Sep 03 j 11:43	19° Ω 55'53	19.44666 AU
conjunction	-2656 Jul 27 j 15:39	11° 9 52'46	0°36'31				
minimum elong	-2656 Jul 27 j 15:39	11° © 52'46	0°36'35	conjunction	-2648 Sep 04 j 01:05	19° Ω 57'59	0°46'52
retrograde	-2656 Nov 12 j 02:43	16°9516'06		minimum elong	-2648 Sep 04 j 01:05	19° Ω 57'59	0°46'55
opposition	-2655 Jan 24 j 11:07	14°9514'01	0°42'02	retrograde	-2648 Dec 19 j 21:33	24° Ω 17'57	
min. Earth dist.	-2655 Jan 25 j 11:25	14° © 11'23	17.28142 AU	opposition	-2647 Mar 04 j 05:16	22° Ω 16'47	0°52'13
direct	-2655 Apr 11 j 00:37	12° © 07'20		min. Earth dist.			
				mm. Larm dist.	-2647 Mar 04 j 17:28	22° Ω 15′29	17.46931 AU
conjunction				direct	-2647 Mar 04 j 17:28 -2647 May 20 j 10:14		17.46931 AU
	-2655 Aug 01 j 18:58	16° 5 40'30	0°38'50		-		17.46931 AU
minimum elong	-2655 Aug 01 j 18:58 -2655 Aug 01 j 18:58	16°540'30 16°540'30	0°38'50 0°38'55		-	20° Ω 11'38	17.46931 AU 0°46'47
minimum elong max. Earth dist.	• •	16°5940'30		direct	-2647 May 20 j 10:14	20°Ω11'38 24°Ω39'44	
C	-2655 Aug 01 j 18:58	16°5940'30	0°38'55	direct	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08	20°Ω11'38 24°Ω39'44 24°Ω39'44	0°46'47
max. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18	16°540'30 16°536'17 21°503'37	0°38'55 19.28128 AU	direct conjunction minimum elong	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08	20°\Omega11'38 24°\Omega39'44 24°\Omega39'44 24°\Omega37'47	0°46'47 0°46'50
max. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34	0°38'55 19.28128 AU 0°44'29	conjunction minimum elong max. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03	0°46'47 0°46'50
max. Earth dist. retrograde opposition	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06	0°38'55 19.28128 AU 0°44'29	conjunction minimum elong max. Earth dist. retrograde	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03	0°46'47 0°46'50 19.49269 AU 0°51'56
max. Earth dist. retrograde opposition min. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06	0°38'55 19.28128 AU 0°44'29	conjunction minimum elong max. Earth dist. retrograde opposition	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02	0°46'47 0°46'50 19.49269 AU 0°51'56
max. Earth dist. retrograde opposition min. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54	0°38'55 19.28128 AU 0°44'29	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02	0°46'47 0°46'50 19.49269 AU 0°51'56
max. Earth dist. retrograde opposition min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54	0°38'55 19.28128 AU 0°44'29 17.28344 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02 24°\Omega 53'15	0°46'47 0°46'50 19.49269 AU 0°51'56
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 55'02 24°\Omega 53'15 29°\Omega 20'11	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 55'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$25'51	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 55'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34 -2646 Sep 13 j 11:16 -2646 Sep 24 j 10:27	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 13 j 11:16	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 18'43 0°\Omega 0	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34 -2646 Sep 13 j 11:16 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'15 129°\Omega 30'\Omega 38'46 1°\Omega 37'57	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 13 j 11:16 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'15 129°\Omega 30'\Omega 38'46 1°\Omega 37'57	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06 -2653 Aug 11 j 23:54	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18 21°\$42'06	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36 17.29140 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22 -2645 Apr 27 j 22:57	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 18'43 0°\Omega 3°\Omega 38'46 1°\Omega 37'57 1°\Omega 37'04 30°\R\Omega 30'\R\Omega 30	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06 -2653 Aug 11 j 23:54 -2653 Aug 11 j 23:54	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18 21°\$42'06 26°\$14'48 26°\$14'48	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36 17.29140 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22 -2645 Apr 27 j 22:57 -2645 May 30 j 14:43	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06 -2653 Aug 11 j 23:54 -2653 Aug 11 j 23:54 -2653 Aug 10 j 23:51	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18 21°\$42'06 26°\$14'48 26°\$14'48 26°\$10'59	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36 17.29140 AU 0°42'38 0°42'42	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22 -2645 Apr 27 j 22:57	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 18'43 0°\Omega 3°\Omega 38'46 1°\Omega 37'57 1°\Omega 37'04 30°\Omega 29°\Omega 33'32	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06 -2653 Aug 11 j 23:54 -2653 Aug 10 j 23:51 -2653 Oct 21 j 14:09	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$48'44 23°\$46'18 21°\$42'06 26°\$14'48 26°\$14'48 26°\$10'59 0°\$\$\Omega\$\$	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36 17.29140 AU 0°42'38 0°42'42	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 13 j 11:16 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22 -2645 Apr 27 j 22:57 -2645 May 30 j 14:43 -2645 Jul 01 j 14:07	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 58'03 26°\Omega 57'02 24°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 38'46 1°\Omega 37'57 1°\Omega 37'04 30°\Omega 29°\Omega 33'32 0°\Omega 0	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU
max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2655 Aug 01 j 18:58 -2655 Jul 31 j 16:18 -2655 Nov 17 j 04:29 -2654 Jan 29 j 12:58 -2654 Jan 30 j 11:43 -2654 Apr 16 j 06:08 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 06 j 21:43 -2654 Aug 05 j 20:06 -2654 Nov 22 j 03:11 -2653 Feb 03 j 15:11 -2653 Feb 04 j 13:40 -2653 Apr 21 j 09:06 -2653 Aug 11 j 23:54 -2653 Aug 11 j 23:54 -2653 Aug 10 j 23:51	16°\$40'30 16°\$36'17 21°\$03'37 19°\$01'34 18°\$59'06 16°\$54'54 21°\$27'54 21°\$27'54 21°\$23'51 25°\$50'44 23°\$46'18 21°\$42'06 26°\$14'48 26°\$10'59 0°\$\Omega\$0"\Omega\$7'16	0°38'55 19.28128 AU 0°44'29 17.28344 AU 0°40'53 0°40'57 19.28620 AU 0°46'36 17.29140 AU 0°42'38 0°42'42	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2647 May 20 j 10:14 -2647 Sep 08 j 23:08 -2647 Sep 08 j 23:08 -2647 Sep 08 j 10:46 -2647 Dec 24 j 20:43 -2646 Mar 09 j 07:06 -2646 Mar 09 j 16:42 -2646 May 25 j 12:56 -2646 Sep 13 j 20:34 -2646 Sep 13 j 20:34 -2646 Sep 24 j 10:27 -2646 Dec 29 j 17:50 -2645 Mar 14 j 08:56 -2645 Mar 14 j 17:22 -2645 Apr 27 j 22:57 -2645 May 30 j 14:43	20°\Omega 11'38 24°\Omega 39'44 24°\Omega 39'44 24°\Omega 37'47 28°\Omega 59'03 26°\Omega 57'02 24°\Omega 53'15 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 20'11 29°\Omega 18'43 0°\Omega 3°\Omega 38'46 1°\Omega 37'57 1°\Omega 37'04 30°\Omega 29°\Omega 33'32	0°46'47 0°46'50 19.49269 AU 0°51'56 17.51733 AU 0°46'23 0°46'24 19.54250 AU 0°51'18 17.56870 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2645 in astronomical counting style is the year 2646 BCE in historical counting style. -2645 Sep 18 j 08:31 3°m 57'51 19.59541 AU max. Earth dist. -2637 Oct 24 i 12:11 10° **2**03'46 20.09367 AU max. Earth dist. -2644 Jan 03 j 16:02 8° m 17'01 -2636 Feb 08 j 14:39 14°**£**13'25 retrograde retrograde 6° Mp 16'19 -2644 Mar 18 j 10:20 -2636 Apr 25 j 00:07 12° **2**13'21 0°32'31 opposition 0°50'20 opposition -2636 Apr 24 j 14:02 12°**2**14'23 18.12847 AU min. Earth dist. -2644 Mar 18 j 16:22 6° m 15'41 17.62300 AU min. Earth dist. -2636 Jul 11 j 04:38 10°**≙**12'14 -2644 Jun 03 j 16:11 4° m 12'15 direct direct -2644 Sep 22 j 12:40 8° Mp 36'30 0°44'40 conjunction -2636 Oct 27 j 15:18 14°**£**23'49 0°27'53 conjunction -2644 Sep 22 j 12:40 -2636 Oct 27 j 15:18 14°**£**23'49 0°27'52 minimum elong 8° Mp 36'30 0°44'41 minimum elong -2644 Sep 22 j 07:20 -2636 Oct 28 j 02:59 14°**£**25'36 20.16366 AU max. Earth dist. 8° **m** 35'40 19.65096 AU max. Earth dist. -2635 Feb 12 j 06:17 18°**೨**34'03 retrograde -2643 Jan 07 j 12:15 12° m 53'33 retrograde opposition -2643 Mar 23 j 11:20 10° m 52'59 0°49'02 opposition -2635 Apr 29 j 19:33 16°**♀**34'09 0°29'20 -2643 Mar 23 j 15:48 10° m 52'31 17.67959 AU -2635 Apr 29 j 06:39 16°**♀**35'28 18.19873 AU min. Earth dist. min. Earth dist. -2643 Jun 08 j 17:40 -2635 Jul 15 j 23:53 14°**೨**33'29 direct 8°Mp49'16 direct conjunction -2643 Sep 27 j 07:14 13° mp 12'03 0°43'22 conjunction -2635 Nov 01 j 02:43 18°**△**43'32 0°24'58 minimum elong -2643 Sep 27 j 07:14 13° **m** 12'03 0°43'24 minimum elong -2635 Nov 01 j 02:43 18°**♀**43'32 0°24'58 max. Earth dist. -2643 Sep 27 j 02:51 13° Mp 11'22 19.70865 AU max. Earth dist. -2635 Nov 01 j 16:07 18°**£**45'33 20.23407 AU retrograde -2642 Jan 12 j 08:41 17° Mp 28'16 retrograde -2634 Feb 16 j 20:05 22°**♀**53'00 opposition -2642 Mar 28 j 11:43 15° m 27'46 0°47'26 opposition -2634 May 04 j 14:30 20°**♀**53'15 min. Earth dist. -2642 Mar 28 j 14:07 15° mp 27'31 17.73826 AU min. Earth dist. -2634 May 04 j 00:40 20° **2**54'39 18.26919 AU direct -2642 Jun 13 j 18:10 13° m 24'24 direct -2634 Jul 20 j 15:39 18°**£**53'03 conjunction -2642 Oct 02 j 01:04 17° m 45'39 0°41'49 conjunction -2634 Nov 05 j 13:28 23°**2**01'34 0°21'56 minimum elong -2642 Oct 02 i 01:04 17° m 45'39 0°41'50 minimum elong -2634 Nov 05 j 13:28 23°**2**01'34 0°21'53 max. Earth dist. -2642 Oct 01 j 23:39 17° m 45'26 19.76824 AU max. Earth dist. -2634 Nov 06 j 04:53 23°**2**03'54 20.30432 AU retrograde -2641 Jan 17 j 03:07 22° m 00'59 retrograde -2633 Feb 21 j 10:57 27° **2**10'18 -2641 Apr 02 j 11:26 20° m 00'34 0°45'33 -2633 May 09 j 08:35 25° **2**10'42 0°22'34 opposition opposition -2641 Apr 02 j 11:53 20° m 00'31 17.79860 AU min. Earth dist. -2633 May 08 j 16:07 25° **2**12'22 18.33897 AU min. Earth dist. -2641 Jun 18 j 19:07 17° m 57'32 direct -2633 Jul 25 j 09:09 23°**♀**10'56 direct -2641 Oct 06 j 17:45 22° m 17'12 0°40'01 -2633 Nov 09 j 23:34 27°**2**17'59 0°18'47 conjunction conjunction -2641 Oct 06 j 17:45 22° m 17'12 0°40'01 -2633 Nov 09 j 23:35 27°**£**17'59 0°18'45 minimum elong minimum elong -2641 Oct 06 j 17:36 22° m 17'10 19.82955 AU max. Earth dist. -2633 Nov 10 j 16:36 27°**Ω**20'32 20.37349 AU max. Earth dist. -2640 Jan 21 j 21:40 26° m 31'39 -2633 Dec 28 j 19:25 0°M retrograde 1° ML26'00-2640 Apr 06 j 10:40 24° m 31'16 0°43'23 -2632 Feb 25 j 23:33 opposition retrograde -2640 Apr 06 j 09:10 24° Mp 31'25 17.86089 AU -2632 Apr 29 j 02:39 30°R € min. Earth dist. -2640 Jun 22 j 17:46 22° m 28'34 min. Earth dist. -2632 May 12 j 09:13 29°**£**28'15 18.40752 AU direct opposition -2632 May 13 j 02:13 29°**Ω**26'32 0°19'00 conjunction -2640 Oct 10 j 09:26 26° m 46'36 0°37'58 direct -2632 Jul 28 j 23:15 27°**♀**27'12 minimum elong -2640 Oct 10 j 09:26 26° Mp 46'36 0°37'59 -2632 Oct 17 j 22:49 0°M max. Earth dist. -2640 Oct 10 j 12:22 26° m 47'03 19.89280 AU -2640 Dec 08 j 12:52 0°**♀** -2632 Nov 13 j 09:04 1°M32'48 0°15'33 conjunction -2639 Jan 25 j 14:39 1°**2**00'10 -2632 Nov 13 j 09:04 1°MJ32'48 0°15'30 retrograde minimum elong -2639 Mar 16 j 23:56 30°R Mp behind sun begin -2632 Nov 13 j 06:59 1°M32'30 -2639 Apr 11 j 09:07 28° m 59'50 0°40'59 behind sun end -2632 Nov 13 j 11:09 1°M33'06 opposition -2639 Apr 11 j 05:05 29° m 00'15 17.92499 AU 1°MJ35'34 20.44110 AU min. Earth dist. max. Earth dist. -2632 Nov 14 i 03:35 -2639 Jun 27 i 17:09 26° m 57'29 direct retrograde -2631 Mar 01 j 13:41 5°**M**40'07 -2639 Sep 24 j 17:47 opposition -2631 May 17 j 18:54 3°ML40'46 0°15'22 min. Earth dist. -2631 May 16 j 23:33 3°ML42'43 18.47397 AU -2639 Oct 15 j 00:11 1°**2**13'53 0°35'43 direct -2631 Aug 02 j 14:50 1°M41'50 conjunction -2639 Oct 15 i 00:11 1°**£**13'53 0°35'43 minimum elong max. Earth dist. -2639 Oct 15 j 04:42 1°**2**14'34 19.95788 AU -2631 Nov 17 j 18:02 5°ML46'01 0°12'15 conjunction -2638 Jan 30 j 07:16 5°**£**26'35 -2631 Nov 17 j 18:03 5°M46'01 0°12'13 retrograde minimum elong -2631 Nov 17 j 13:34 opposition -2638 Apr 16 j 06:43 3°**2**26'18 0°38'22 behind sun begin 5°M45′22 min. Earth dist. -2638 Apr 16 j 00:59 3°**2**26'53 17.99116 AU behind sun end -2631 Nov 17 j 22:31 5°M46'40 direct -2638 Jul 02 j 13:24 1°**£**24'19 max. Earth dist. -2631 Nov 18 j 13:51 5°M48'58 20.50616 AU retrograde -2630 Mar 06 j 01:17 9°M52'38 -2638 Oct 19 j 14:08 5°**2**39'06 0°33'17 -2630 May 22 j 10:53 7°M53'22 0°11'40 conjunction opposition -2638 Oct 19 j 14:08 -2630 May 21 j 15:28 7°M55'20 18.53772 AU minimum elong 5°**2**39'06 0°33'17 min. Earth dist. -2638 Oct 19 j 21:29 5°**2**40'13 20.02499 AU direct -2630 Aug 07 j 03:44 5°M54'47 max. Earth dist. retrograde -2637 Feb 03 j 23:28 9°**£**50′56 opposition -2637 Apr 21 j 03:41 7°**£**50'46 0°35'32 conjunction -2630 Nov 22 j 02:28 9°**™**57'37 0°08'55 min. Earth dist. -2637 Apr 20 j 19:03 7°**£**51'39 18.05903 AU minimum elong -2630 Nov 22 j 02:27 9°**™**57'37 0°08'53 direct -2637 Jul 07 j 10:35 5°**£**49'13 behind sun begin -2630 Nov 21 j 20:48 9°**IL**56'48 behind sun end -2630 Nov 22 j 08:06 9°M58'26 -2637 Oct 24 j 03:02 10° **2**02'22 0°30'40 max. Earth dist. -2630 Nov 22 j 23:14 10°ML00'42 20.56840 AU conjunction -2637 Oct 24 j 03:02 10° **2**02'22 0°30'39 -2629 Mar 10 j 14:15 14° ML03'34 minimum elong retrograde

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 19 Attention, astronomical year style is used: The year -2629 in astronomical counting style is the year 2630 BCE in historical counting style.

Attention, astronom	ical year style is used: The	ne year -2629	in astronomical co	unting style is the year	2630 BCE in historic	al counting style	e.
min. Earth dist.	-2629 May 26 j 04:33	12°ML06'31	18.59831 AU	min. Earth dist.	-2623 Jun 20 j 02	44 6° ∡ ³39'51	18.89863 AU
opposition	-2629 May 27 j 02:08	12°ML04'21	0°07'56	opposition	-2623 Jun 21 j 05	42 6° ₰ ³37'09	0°-14'-4
direct	-2629 Aug 11 j 17:38	10°M06'05		direct	-2623 Sep 05 j 09	37 4° ⋌ ¹40'14	
						_	
conjunction	-2629 Nov 26 j 10:09	14°ML07'34		conjunction	-2623 Dec 19 j 22		0°-14'-17
minimum elong	-2629 Nov 26 j 10:09	14°ML07'34	0°05'31	minimum elong	-2623 Dec 19 j 22		
behind sun begin	-2629 Nov 26 j 03:51			behind sun begin	-2623 Dec 19 j 19		
behind sun end	-2629 Nov 26 j 16:27	14°ML08'29	20. (252.)	behind sun end	-2623 Dec 20 j 01		
max. Earth dist.	-2629 Nov 27 j 08:13		20.62726 AU	max. Earth dist.	-2623 Dec 21 j 02		20.91885 AU
	-2629 Dec 11 j 06:25			retrograde	-2622 Apr 08 j 10		
retrograde	-2628 Mar 14 j 00:50		000444	opposition	-2622 Jun 25 j 15		
opposition	-2628 May 30 j 16:48	16°M 13'41		min. Earth dist.	-2622 Jun 24 j 13		18.93901 AU
min. Earth dist.	-2628 May 29 j 19:16		18.65558 AU	direct	-2622 Sep 09 j 16	47 8° ∡ 741'30	
T'	-2628 Jul 02 j 17:18				2/22 D 24:02	20 120 725120	00 171 22
direct	-2628 Aug 15 j 05:42			conjunction	-2622 Dec 24 j 03		
	-2628 Sep 26 j 05:10	15°11L		minimum elong	-2622 Dec 24 j 03		
. ,.	262031 20:17.22	100 M 15150	0000111	max. Earth dist.	-2622 Dec 25 j 07		20.95774 AU
conjunction	-2628 Nov 29 j 17:22			retrograde	-2621 Apr 12 j 20		10.07(22.44)
minimum elong	-2628 Nov 29 j 17:23		0°02'08	min. Earth dist.	-2621 Jun 28 j 21		
behind sun begin	-2628 Nov 29 j 10:51			opposition	-2621 Jun 30 j 01		
behind sun end	•		20.60205.433	direct	-2621 Sep 14 j 00	5/ 12° × '41'56	
max. Earth dist.	,		20.68295 AU		2(21 D 20:00	06 160 70505	00 201 21
retrograde	-2627 Mar 18 j 12:48		10 500 (5 17)	conjunction	-2621 Dec 28 j 08		
min. Earth dist.	-2627 Jun 03 j 06:49		18.70967 AU	minimum elong	-2621 Dec 28 j 08		
opposition	-2627 Jun 04 j 06:17		0°00'2'/	max. Earth dist.	-2621 Dec 29 j 13		
desc. node	-2627 Jul 18 j 23:26			retrograde	-2620 Apr 16 j 04		
direct	-2627 Aug 19 j 17:45	18°¶L23'34		min. Earth dist.	-2620 Jul 02 j 07		
		m		opposition	-2620 Jul 03 j 10		0°-24'-7
conjunction	-2627 Dec 04 j 00:02			direct	-2620 Sep 17 j 06	56 16° × ′41′42	
minimum elong	-2627 Dec 04 j 00:01		0°01'22				
behind sun begin	-2627 Dec 03 j 17:29			conjunction	-2620 Dec 31 j 12		
behind sun end	-2627 Dec 04 j 06:34			minimum elong	-2620 Dec 31 j 12		
max. Earth dist.	-2627 Dec 05 j 00:12		20.73541 AU	max. Earth dist.	-2619 Jan 01 j 17		
retrograde	-2626 Mar 22 j 21:40			retrograde	-2619 Apr 20 j 13		
opposition	-2626 Jun 08 j 19:17			opposition	-2619 Jul 07 j 19		
min. Earth dist.	-2626 Jun 07 j 19:52		18.76078 AU	min. Earth dist.	-2619 Jul 06 j 15		19.03879 AU
direct	-2626 Aug 24 j 04:43	22°M29'50		direct	-2619 Sep 21 j 14	02 20° ⋌ ¹40'54	
	2(2(B) 00:0(0)	2.60 W 2.712.0	00 41 20		2610 7 04:15	50 040 30000	00.24.1
conjunction	-2626 Dec 08 j 06:04			conjunction	-2618 Jan 04 j 17		
minimum elong	-2626 Dec 08 j 06:03		0°04'43	minimum elong	-2618 Jan 04 j 17		
behind sun begin	-2626 Dec 07 j 23:40	26°M26'44		max. Earth dist.	-2618 Jan 05 j 22		
behind sun end	-2626 Dec 08 j 12:27	26°M28'34		retrograde	-2618 Apr 24 j 21		
max. Earth dist.	-2626 Dec 09 j 06:59		20.78518 AU	min. Earth dist.	-2618 Jul 11 j 01		
	-2625 Feb 19 j 14:37	0° ∡ ¹		opposition	-2618 Jul 12 j 04		
retrograde	-2625 Mar 27 j 09:08	0° ∡ 31'12		direct	-2618 Sep 25 j 19	30 24° ҂ ′39'40	
	-2625 May 03 j 00:24	30°RM₁					
min. Earth dist.	-2625 Jun 12 j 06:00		18.80928 AU	conjunction	-2617 Jan 08 j 22		
opposition	-2625 Jun 13 j 07:25	28°M31'56	0°-6'-55	minimum elong	-2617 Jan 08 j 22		
direct	-2625 Aug 28 j 15:16	26°M34'35		max. Earth dist.	-2617 Jan 10 j 02		21.07272 AU
	-2625 Dec 03 j 12:44	0° ∡ ¹		_	-2617 Feb 04 j 04		
		_		retrograde	-2617 Apr 29 j 06		
conjunction	-2625 Dec 12 j 11:49	0° ∡ ³31'21		min. Earth dist.	-2617 Jul 15 j 09		19.08191 AU
minimum elong	-2625 Dec 12 j 11:49	0° ∡ ³31'21	0°08'00	opposition	-2617 Jul 16 j 12		0°-33'-5
behind sun begin	-2625 Dec 12 j 05:57	0° ∡ 30'31			-2617 Jul 30 j 21		
behind sun end	-2625 Dec 12 j 17:41	0° ∡ ³32'11		direct	-2617 Sep 30 j 01		
max. Earth dist.	-2625 Dec 13 j 14:07		20.83230 AU		-2617 Nov 26 j 23	12 0°る	
retrograde	-2624 Mar 30 j 16:51	4° ∡ ³34'24				-	
opposition	-2624 Jun 16 j 18:57		0°-10'-31	conjunction	-2616 Jan 13 j 03		0°-31'-9
min. Earth dist.	-2624 Jun 15 j 17:40		18.85525 AU	minimum elong	-2616 Jan 13 j 03		
direct	-2624 Sep 01 j 00:23	0° ∡ 38'00		max. Earth dist.	-2616 Jan 14 j 07		21.08869 AU
_		=		retrograde	-2616 May 02 j 13		
conjunction	-2624 Dec 15 j 17:13	4° ∡ ¹33'47		opposition	-2616 Jul 19 j 19		0°-35'-46
minimum elong	-2624 Dec 15 j 17:13	4° ∡ ¹33'47	0°11'13	min. Earth dist.	-2616 Jul 18 j 18		19.09502 AU
behind sun begin	-2624 Dec 15 j 12:20	4° ∡ ³33'06		direct	-2616 Oct 03 j 07	06 2° る 36'04	
behind sun end	-2624 Dec 15 j 22:06	4° ∡ ³34'29 −				_	
max. Earth dist.	-2624 Dec 16 j 19:59		20.87702 AU	conjunction	-2615 Jan 16 j 08		0°-33'-30
retrograde	-2623 Apr 04 j 03:43	8° ∡ ¹36'25		minimum elong	-2615 Jan 16 j 08	58 6° る 27'32	0°33'35

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2615 in astronomical counting style is the year 2616 BCE in historical counting style. -2615 Jan 17 j 11:54 6°る31'23 21.09900 AU max. Earth dist. -2607 Feb 18 i 05:56 8°≈12'42 21.01377 AU max. Earth dist. -2615 May 06 j 22:21 10°る28'49 retrograde -2607 Jun 08 j 14:50 12°≈12'57 retrograde -2615 Jul 23 j 01:46 8°る32'12 19.10243 AU min. Earth dist. -2607 Aug 24 j 11:59 10°≈14'55 19.00055 AU min. Earth dist. -2607 Aug 25 j 05:57 10°≈13'05 0°-50'-53 -2615 Jul 24 j 03:15 0°-38'-16 8°**る**29'39 opposition opposition -2615 Oct 07 j 12:49 6°る33'45 -2607 Nov 08 j 00:48 direct direct 8°≈16'23 -2614 Jan 20 j 14:09 10°**♂**25'04 0°-35'-41 -2606 Feb 21 j 17:48 12°≈09'50 0°-46'-19 conjunction conjunction -2614 Jan 20 j 14:09 10°**궁**25'04 0°35'47 -2606 Feb 21 j 17:48 12°≈09'50 0°46'23 minimum elong minimum elong -2606 Feb 22 j 13:16 12°≈12'37 20.98560 AU max. Earth dist. -2614 Jan 21 j 16:56 10°중28'53 21.10353 AU max. Earth dist. -2606 Apr 17 j 17:10 15°≈ retrograde -2614 May 11 j 05:09 14°る26'23 min. Earth dist. -2614 Jul 27 j 10:10 12°중29'32 19.10430 AU retrograde -2606 Jun 12 j 23:27 16°≈13'27 -2614 Jul 28 j 10:16 12°**♂**27'07 -2606 Aug 10 j 00:18 15°R≈ opposition 0°-40'-34 -2614 Oct 11 j 17:48 10°♂31'11 -2606 Aug 29 j 12:15 14°≈13'32 0°-51'-27 direct opposition min. Earth dist. -2606 Aug 28 j 20:01 14°≈15'12 18.97028 AU conjunction -2613 Jan 24 j 19:29 14°₹22'24 0°-37'-42 direct -2606 Nov 12 j 05:16 12°≈16'42 minimum elong -2613 Jan 24 j 19:29 14°중22'24 0°37'47 -2605 Feb 05 j 02:56 max. Earth dist. -2613 Jan 25 j 21:02 14°중26'03 21.10304 AU retrograde -2613 May 15 j 13:46 18°**♂**23'48 conjunction -2605 Feb 26 j 02:33 16°≈10'51 opposition -2613 Aug 01 j 16:57 16°₹24'25 0°-42'-41 minimum elong -2605 Feb 26 j 02:33 16°≈10'51 0°46'47 min. Earth dist. -2613 Jul 31 j 17:00 16°る26'50 19.10144 AU max. Earth dist. -2605 Feb 26 j 19:39 16°≈13'17 20.95335 AU direct -2613 Oct 15 j 22:57 14°る28'24 retrograde -2605 Jun 17 j 10:33 20°≈15'01 opposition -2605 Sep 02 j 18:39 18°≈15'02 0°-51'-45 conjunction -2612 Jan 29 i 01:00 18°る19'39 0°-39'-31 min. Earth dist. -2605 Sep 02 i 03:47 18°≈16'33 18.93578 AU minimum elong -2612 Jan 29 i 01:00 18°る19'39 0°39'37 direct -2605 Nov 16 j 10:33 16°≈18'00 max. Earth dist. -2612 Jan 30 j 02:29 18°중23'16 21.09783 AU retrograde -2612 May 18 j 20:08 22°る21'10 -2604 Mar 01 j 12:10 20°≈12'58 0°-46'-52 conjunction -2612 Aug 04 j 23:26 20°る21'41 0°-44'-36 -2604 Mar 01 j 12:10 20°≈12'58 0°46'55 opposition minimum elong -2612 Aug 04 j 00:50 20°る23'58 19.09408 AU max. Earth dist. -2604 Mar 02 j 04:06 20°≈15'14 20.91643 AU min. Earth dist. -2612 Oct 19 j 03:20 18° ₹25'34 -2604 Jun 20 j 20:10 24°≈17'41 direct retrograde -2604 Sep 06 j 01:23 22°≈17'37 0°-51'-49 opposition -2611 Feb 01 j 06:50 22° 중16'55 0°-41'-9 -2604 Sep 05 j 12:33 22°≈18'56 18.89639 AU conjunction min. Earth dist. -2604 Nov 19 j 15:33 20°≈20'22 -2611 Feb 01 j 06:50 22° 중16'55 0°41'14 minimum elong direct -2611 Feb 02 j 06:58 22°중20'22 21.08851 AU max. Earth dist. -2611 May 23 j 05:12 26°る18'39 -2603 Mar 05 j 22:24 24°≈16'11 0°-46'-47 retrograde conjunction -2611 Aug 08 j 07:16 24°る21'18 19.08280 AU -2603 Mar 05 j 22:24 24°≈16'11 0°46'51 min. Earth dist. minimum elong -2611 Aug 09 j 05:31 24°る19'03 0°-46'-18 -2603 Mar 06 j 11:24 24°≈18'02 20.87469 AU opposition max. Earth dist. -2611 Oct 23 j 07:56 22°**정**22'49 -2603 Jun 25 j 07:53 28°≈21'30 direct retrograde opposition -2603 Sep 10 j 08:14 26°≈21'19 0°-51'-36 conjunction -2610 Feb 05 j 12:57 26°る14'25 0°-42'-36 min. Earth dist. -2603 Sep 09 j 21:06 26°≈22'28 18.85216 AU minimum elong -2610 Feb 05 j 12:57 26° **정**14'25 0°42'41 direct -2603 Nov 23 j 22:04 24°≈23'47 max. Earth dist. -2610 Feb 06 j 12:54 26°る17'49 21.07523 AU -2610 May 01 j 10:19 0°≈ -2602 Mar 10 j 09:23 28°≈20'32 0°-46'-29 conjunction -2610 May 27 j 11:41 0°≈16'23 -2602 Mar 10 j 09:23 28°≈20'32 0°46'31 retrograde minimum elong -2610 Jun 22 j 22:11 30°R ₹ max. Earth dist. -2602 Mar 10 j 21:05 28°≈22'13 20.82802 AU -2610 Aug 13 j 11:42 28° 중16'43 0°-47'-47 -2602 Apr 09 j 03:02 0°**)**€ opposition -2610 Aug 12 j 14:46 28°る18'50 19.06767 AU -2602 Jun 29 i 18:13 min. Earth dist. retrograde 2°\ 26'28 -2610 Oct 27 j 11:56 26°る20'22 direct opposition -2602 Sep 14 i 15:27 0°\(\frac{1}{26}\)'08 0°-51'-8 -2609 Feb 06 i 05:07 0°**≈** min. Earth dist. -2602 Sep 14 i 06:20 0° **★**27'05 18.80312 AU -2602 Sep 25 i 06:18 30°R≈ -2609 Feb 09 i 19:17 0°≈12'16 0°-43'-50 direct -2602 Nov 28 j 03:57 28°≈28'19 conjunction -2609 Feb 09 i 19:17 0°≈12'16 0°43'54 -2601 Jan 28 j 11:06 0°₩ minimum elong max. Earth dist. -2609 Feb 10 j 17:45 0°≈15'28 21.05842 AU retrograde -2609 May 31 j 21:11 conjunction -2601 Mar 14 j 20:51 2°\ 26'02 0°-45'-55 4°≈14'35 -2601 Mar 14 j 20:51 opposition -2609 Aug 17 j 17:48 2°≈14'50 0°-49'-3 minimum elong 2°**)** 26'02 0°45'58 min. Earth dist. -2609 Aug 16 j 21:22 2°≈16'54 19.04904 AU max. Earth dist. -2601 Mar 15 j 05:35 2°**升**27'17 20.77698 AU direct -2609 Oct 31 j 16:16 0°≈18'22 retrograde -2601 Jul 04 j 06:16 6°**)** € 32'37 opposition -2601 Sep 18 j 22:55 4°**)** 32'06 0°-50'-24 -2608 Feb 14 j 02:18 4°≈10'42 0°-44'-53 min. Earth dist. -2601 Sep 18 j 15:36 4°**升**32'51 18.74999 AU conjunction -2608 Feb 14 j 02:18 direct -2601 Dec 02 j 11:25 2°**)** ₹33'55 minimum elong 4°≈10'42 0°44'57 -2608 Feb 15 j 00:22 max. Earth dist. 4°≈13'50 21.03790 AU -2608 Jun 04 j 04:45 -2600 Mar 18 j 09:18 6°**)** 32'43 0°-45'-7 retrograde 8°≈13'22 conjunction opposition -2608 Aug 20 j 23:48 6°≈13'34 0°-50'-5 minimum elong -2600 Mar 18 j 09:18 6°**)** 32′43 0°45'10 min. Earth dist. -2608 Aug 20 j 04:56 6°≈15'29 19.02664 AU max. Earth dist. -2600 Mar 18 j 16:49 6°**₭**33'47 20.72194 AU direct -2608 Nov 03 j 20:21 4°≈16'59 retrograde -2600 Jul 07 j 17:33 10°**∺**39'57 opposition -2600 Sep 22 j 06:31 8°**∺**39'15 0°-49'-24 -2607 Feb 17 j 09:48 8°≈09'50 0°-45'-42 min. Earth dist. -2600 Sep 22 j 01:07 8°**)** 39'49 18.69319 AU conjunction

-2607 Feb 17 j 09:48

minimum elong

8°≈09'50 0°45'47

direct

-2600 Dec 05 j 18:38

6°**)** 40'43

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2599 in astronomical counting style is the year 2600 BCE in historical counting style. -2599 Mar 22 j 22:18 10° \(\frac{1}{40}\)'38 0°-44'-5 conjunction $-2591 \text{ Apr } 27 \text{ j } 12:31 \quad 14^{\circ} \Upsilon 43'14 \quad 0^{\circ} -27' -42$ conjunction minimum elong -2599 Mar 22 j 22:18 10° \(\mathbf{\psi}\) 40'38 0°44'07 -2591 Apr 27 j 12:31 14°**Υ**'43'14 0°27'43 minimum elong -2599 Mar 23 j 02:48 10° \(\frac{1}{41}\)'17 20.66376 AU max. Earth dist. -2591 Apr 27 j 00:18 14°**Υ**41'26 20.14578 AU max. Earth dist. -2591 Aug 16 j 03:56 18°**Y**57'56 retrograde retrograde -2591 Oct 30 j 01:40 16° Υ 56'11 0° -29'-7 -2599 Sep 26 j 14:35 12° **)** 47'42 0°-48'-8 opposition opposition -2599 Sep 26 j 10:59 12°**)** 48'05 18.63368 AU -2591 Oct 30 j 12:25 16°**Y**55'02 18.11170 AU min. Earth dist. min. Earth dist. -2599 Dec 10 j 02:24 10° **★** 48'46 -2590 Jan 12 j 17:37 14° **Y** 54'23 direct direct -2598 Mar 27 j 11:59 14° **★** 49'54 0°-42'-49 -2590 May 02 j 09:26 19°**Y**07'28 0°-24'-44 conjunction conjunction -2598 Mar 27 j 11:59 14° **H** 49'54 0°42'52 -2590 May 02 j 09:25 19°**Y**07'28 0°24'43 minimum elong minimum elong -2598 Mar 27 j 15:34 14° **€** 50'25 20.60302 AU -2590 May 01 j 20:02 19°**Y**05'29 20.07756 AU max. Earth dist. max. Earth dist. -2590 Aug 20 j 22:08 23°**Y**23'01 retrograde retrograde -2590 Nov 03 j 15:09 21°**Υ**21'11 0°-25'-43 opposition -2598 Sep 30 j 23:03 16° X 57'32 0°-46'-37 opposition min. Earth dist. -2598 Sep 30 j 21:03 16° **¥** 57'45 18.57188 AU min. Earth dist. -2590 Nov 04 j 03:07 21°**Y**19'54 18.04306 AU direct -2598 Dec 14 j 11:07 14° **€** 58'14 direct -2589 Jan 17 j 09:14 19°**Υ**19'00 conjunction -2597 Apr 01 j 02:29 19°**米**00'38 0°-41'-19 conjunction -2589 May 07 j 07:16 23°**Y**33'40 0°-21'-35 minimum elong -2597 Apr 01 j 02:29 19° **€** 00'38 0°41'21 minimum elong -2589 May 07 j 07:16 23°**Y**33'40 0°21'34 max. Earth dist. -2597 Apr 01 j 03:01 19° \(\) 00'43 20.54046 AU max. Earth dist. -2589 May 06 j 14:27 23°**Υ**31'10 20.00864 AU retrograde -2597 Jul 21 j 07:48 23° **)** 10'08 retrograde -2589 Aug 25 j 15:27 27° Υ 50'03 opposition -2597 Oct 05 j 07:52 21° ¥08'54 0°-44'-50 opposition -2589 Nov 08 j 05:21 25°**Y**48'05 0°-22'-9 min. Earth dist. -2597 Oct 05 j 07:45 21° \(\)08'55 18.50861 AU min. Earth dist. -2589 Nov 08 j 19:57 25° γ 46'31 17.97405 AU direct -2597 Dec 18 j 19:22 19°**米**09'12 direct -2588 Jan 22 i 00:55 23°**Y**45'29 max. Earth dist. -2588 May 10 j 12:00 27°**Y**59'03 19.93959 AU conjunction -2596 Apr 04 i 18:01 23° ★ 12'59 0°-39'-36 -2596 Apr 04 j 18:01 23° **X** 12'59 0°39'37 -2588 May 11 j 06:03 28°**Υ**'01'45 0°-18'-17 minimum elong conjunction max. Earth dist. -2596 Apr 04 j 17:36 23° H 12'56 20.47649 AU -2588 May 11 j 06:03 28°**Y**01'45 0°18'17 minimum elong retrograde -2596 Jul 24 j 22:20 27° **€** 23'17 -2588 Jun 14 j 06:29 0°8 -2596 Oct 08 j 17:16 25° **★**21'56 0°-42'-49 -2588 Aug 29 j 11:13 opposition retrograde 2°**8**18'55 -2588 Nov 11 j 20:15 0°816'50 0°-18'-25 -2596 Oct 08 j 18:35 25°**米**21'47 18.44406 AU min. Earth dist. opposition -2596 Dec 22 j 05:35 23°**米**21'53 min. Earth dist. -2588 Nov 12 j 11:47 0°**8**15'09 17.90508 AU direct -2588 Nov 18 j 08:29 30°R**Y** -2595 Apr 09 j 10:07 27°**)** €27'04 0°-37'-39 -2587 Jan 25 j 18:37 28°**Y**13'47 conjunction direct -2595 Apr 09 j 10:07 27° **∺**27'04 0°37'40 -2587 Apr 01 j 12:21 0°8 minimum elong max. Earth dist. -2595 Apr 09 j 06:34 27° **★**26'33 20.41157 AU max. Earth dist. -2587 May 15 j 08:26 2°**8**28'29 19.87093 AU -2595 May 26 j 04:14 0°**Υ** -2595 Jul 29 j 12:02 1°**Y**38'14 -2587 May 16 j 05:17 2°**8**31'37 0°-14'-51 retrograde conjunction -2595 Oct 03 j 22:19 30°R ₩ minimum elong -2587 May 16 j 05:17 2°**8**31'37 0°14'50 opposition -2595 Oct 13 j 03:14 29° **)** 36'45 0°-40'-33 behind sun begin -2587 May 16 j 02:57 2°**8**31'16 min. Earth dist. -2595 Oct 13 j 06:30 29° **∺** 36'24 18.37881 AU behind sun end -2587 May 16 j 07:37 2°**8**31'57 direct -2595 Dec 26 j 15:17 27° **€** 36'21 retrograde -2587 Sep 03 j 05:27 6°**8**49'32 -2594 Mar 14 j 23:17 0°**Υ** -2587 Nov 16 j 12:00 4°847'19 0°-14'-32 opposition min. Earth dist. -2587 Nov 17 j 05:58 4°845'23 17.83706 AU -2594 Apr 14 j 03:20 1°**Y**'43'02 0°-35'-28 -2586 Jan 30 j 11:32 2°**8**43'49 conjunction direct -2594 Apr 14 j 03:20 1°Y43'02 0°35'29 max. Earth dist. -2586 May 20 j 07:30 6°859'53 19.80367 AU minimum elong -2594 Apr 13 j 22:55 1°**Υ**42'24 20.34601 AU max. Earth dist. -2594 Aug 03 i 03:49 5°Y55'04 -2586 May 21 i 05:23 7°**8**03'12 0°-11'-19 retrograde conjunction -2594 Oct 17 i 13:45 3°Υ53'31 0°-38'-2 -2586 May 21 i 05:23 opposition minimum elong 7°**と**03'11 0°11'18 min. Earth dist. -2594 Oct 17 i 18:21 3°**Υ**53'01 18.31293 AU behind sun begin -2586 May 21 j 00:30 7°**と**02'28 direct -2594 Dec 31 j 02:47 1°**Y**52'47 behind sun end -2586 May 21 i 10:16 7°**呂**03'55 retrograde -2586 Sep 08 j 02:51 11°821'50 -2593 Apr 18 j 21:19 6°Υ01'01 0°-33'-5 opposition -2586 Nov 21 j 04:11 9°**8**19'29 0°-10'-33 conjunction -2593 Apr 18 j 21:19 6°**Y**'01'01 0°33'07 min. Earth dist. -2586 Nov 21 j 22:42 9°**8**17'28 17.77073 AU minimum elong 5°**Υ**59'53 20.27996 AU max. Earth dist. -2593 Apr 18 j 13:38 direct -2585 Feb 04 j 07:06 7°**8**15'32 retrograde -2593 Aug 07 j 18:51 10°**Y**13′56 max. Earth dist. -2585 May 25 j 06:07 11°**8**32'47 19.73840 AU opposition -2593 Oct 22 j 01:02 8°Υ12'18 0°-35'-17 min. Earth dist. -2593 Oct 22 j 07:54 8°**Υ**11'35 18.24660 AU conjunction -2585 May 26 j 06:07 11°**8**36'25 0°-7'-42 -2592 Jan 04 j 14:30 6°**Y**11'14 -2585 May 26 j 06:06 11°**8**36'25 0°07'40 direct minimum elong -2585 May 25 j 23:59 11°**8**35'31 behind sun begin -2592 Apr 22 j 16:32 10°**Υ**21'04 0°-30'-30 -2585 May 26 j 12:13 11°**8**37'19 conjunction behind sun end -2592 Apr 22 j 16:33 10°**Υ**21'04 0°30'29 -2585 Jul 28 j 21:41 15°**8** minimum elong max. Earth dist. -2592 Apr 22 j 07:48 10° Υ 19'47 20.21325 AU retrograde -2585 Sep 12 j 21:55 15°**8**55'44 retrograde -2592 Aug 11 j 11:40 14°**Y**34'52 -2585 Oct 29 j 20:38 15°R₩ opposition -2592 Oct 25 j 12:53 12° Υ 33'12 0° -32'-18 opposition -2585 Nov 25 j 21:23 13°**8**53'16 0°-6'-28 min. Earth dist. -2592 Oct 25 j 21:08 12° Υ 32'19 18.17948 AU min. Earth dist. -2585 Nov 26 j 18:07 13°**8**51'00 17.70689 AU -2591 Jan 08 j 03:52 10°**Y**31'47 direct -2584 Feb 09 j 01:19 11°848'52 direct

-2584 May 10 j 14:24 15°8

•			_	` //	2585 BCE in historical	, .	age 22
max. Earth dist.	-2584 May 29 j 06:26	•		opposition	-2578 Dec 27 j 18:27		
max. Earm dist.	-2364 May 29 J 00.20	10 007 20	19.07000 AU	min. Earth dist.	-2578 Dec 28 j 19:04		
agniumation	2594 May 20 : 07:24	160 2 11114	00 4! 1	direct	-2577 Mar 13 j 15:49		17.37734 AU
conjunction minimum elong	-2584 May 30 j 07:24			max. Earth dist.	-2577 Jul 03 j 00:41		10 26221 ATT
Č	-2584 May 30 j 07:23		0 03 39	max. Earth dist.	-23//Jul 03 J 00.41	16 Щээээ	19.30231 AU
behind sun begin	-2584 May 30 j 00:41				2577 1-1 04:05-24	100πεοιος	0921140
behind sun end	-2584 May 30 j 14:06			conjunction	-2577 Jul 04 j 05:34		0°21'49
retrograde	-2584 Sep 16 j 20:22		00 21 20	minimum elong	-2577 Jul 04 j 05:34		0°21'54
opposition	-2584 Nov 29 j 15:08			retrograde	-2577 Oct 20 j 11:24		0926110
min. Earth dist.	-2584 Nov 30 j 11:56		17.64625 AU	opposition	-2576 Jan 01 j 17:46		
direct	-2583 Feb 12 j 22:33		10 (1722 ATT	min. Earth dist.	-2576 Jan 02 j 19:13		17.34894 AU
max. Earth dist.	-2583 Jun 03 j 07:05	20°043'38	19.61/22 AU	direct	-2576 Mar 17 j 17:59		10.22500 ATT
:	2502 I 04:00.14	200 47120	00001 12	max. Earth dist.	-2576 Jul 07 j 03:35	23°Щ39′39	19.33588 AU
conjunction	-2583 Jun 04 j 09:14 -2583 Jun 04 j 09:13		0°00'-13 0°00'11		2576 1 1 00:00 46	220TI 44122	0025110
minimum elong	•		0-00-11	conjunction	-2576 Jul 08 j 09:46		0°25'10 0°25'14
behind sun begin	-2583 Jun 04 j 02:30			minimum elong	-2576 Jul 08 j 09:46		0-25-14
behind sun end	-2583 Jun 04 j 15:56			retrograde	-2576 Oct 24 j 11:33		0920150
asc. node	-2583 Jun 26 j 12:06			opposition	-2575 Jan 05 j 17:36		
retrograde	-2583 Sep 21 j 16:30	_	0001150	min. Earth dist.	-2575 Jan 06 j 18:49		17.32479 AU
opposition	-2583 Dec 04 j 09:51			direct	-2575 Mar 22 j 21:15		10.21200 444
min. Earth dist.	-2583 Dec 05 j 08:27		17.58963 AU	max. Earth dist.	-2575 Jul 12 j 09:13	28°Щ26'53	19.31390 AU
direct	-2582 Feb 17 j 18:20						
max. Earth dist.	-2582 Jun 08 j 08:20	25° 8 21'25	19.56282 AU	conjunction	-2575 Jul 13 j 14:13		
				minimum elong	-2575 Jul 13 j 14:13		0°28'25
conjunction	-2582 Jun 09 j 11:26				-2575 Aug 06 j 11:23	0°©	
minimum elong	-2582 Jun 09 j 11:26		0°03'41	retrograde	-2575 Oct 29 j 11:48	2° © 55'02	
behind sun begin	-2582 Jun 09 j 04:43			opposition	-2574 Jan 10 j 17:59	0° © 52'48	0°33'17
behind sun end	-2582 Jun 09 j 18:09			min. Earth dist.	-2574 Jan 11 j 19:23		17.30509 AU
retrograde	-2582 Sep 26 j 15:46				-2574 Jan 31 j 12:49	30°RⅡ	
opposition	-2582 Dec 09 j 05:11	27° 8 44'03	0°06'01	direct	-2574 Mar 28 j 00:38		
min. Earth dist.	-2582 Dec 10 j 03:30		17.53752 AU		-2574 May 20 j 19:40	0 \circ \odot	
direct	-2581 Feb 22 j 16:59						
max. Earth dist.	-2581 Jun 13 j 10:53		19.51300 AU	conjunction	-2574 Jul 18 j 18:22	3° © 19'02	
	-2581 Jun 13 j 05:16	Π °0		minimum elong	-2574 Jul 18 j 18:22	3° © 19'02	
				max. Earth dist.	-2574 Jul 17 j 12:29		19.29656 AU
conjunction	-2581 Jun 14 j 14:23	0° Ⅱ 05'06		retrograde	-2574 Nov 03 j 12:24	7°5942'40	
minimum elong	-2581 Jun 14 j 14:23	0° Ⅱ 05'06	0°07'24	opposition	-2573 Jan 15 j 18:49	5° ≤ 40'27	
behind sun begin	-2581 Jun 14 j 08:12	0° Ⅱ 04'10		min. Earth dist.	-2573 Jan 16 j 20:03		17.29023 AU
behind sun end	-2581 Jun 14 j 20:33	0° I 106'02		direct	-2573 Apr 02 j 04:18	3°533'49	
retrograde	-2581 Oct 01 j 13:06	4° Ⅱ 26'47					
opposition	-2581 Dec 14 j 01:23	2° Ⅱ 24'08		conjunction	-2573 Jul 23 j 22:27	8° 9 06'54	0°34'07
min. Earth dist.	-2581 Dec 15 j 01:16		17.49022 AU	minimum elong	-2573 Jul 23 j 22:27	8° 9 06'54	0°34'11
direct	-2580 Feb 27 j 14:28	0° Ⅱ 18'27		max. Earth dist.	-2573 Jul 22 j 18:07	8° 5 02'26	19.28417 AU
				retrograde	-2573 Nov 08 j 13:12	12° © 30'27	
conjunction	-2580 Jun 18 j 17:38	4° Ⅱ 46'11	0°11'04	opposition	-2572 Jan 20 j 20:06	10°928'17	0°39'28
minimum elong	-2580 Jun 18 j 17:38	4° Ⅱ 46'11	0°11'08	min. Earth dist.	-2572 Jan 21 j 20:41	10° © 25'36	17.28035 AU
behind sun begin	-2580 Jun 18 j 12:40	4° Ⅱ 45'26		direct	-2572 Apr 06 j 08:03	8° 5 21'36	
behind sun end	-2580 Jun 18 j 22:36	4° Ⅱ 46'56		max. Earth dist.	-2572 Jul 26 j 21:43	12° © 50'20	19.27706 AU
max. Earth dist.	-2580 Jun 17 j 13:01		19.46824 AU				
retrograde	-2580 Oct 05 j 13:14	9° Ⅱ 08'22		conjunction	-2572 Jul 28 j 02:06	12° 9 54'49	0°36'39
opposition	-2580 Dec 17 j 22:19	7° Ⅱ 05'46		minimum elong	-2572 Jul 28 j 02:06	12° 9 54'49	0°36'44
min. Earth dist.	-2580 Dec 18 j 21:50	7° Ⅱ 03'11	17.44794 AU	retrograde	-2572 Nov 12 j 13:55	17° © 18'14	
direct	-2579 Mar 03 j 14:34	4° ∏ 59'54		opposition	-2571 Jan 24 j 21:46	15° © 16'04	0°42'10
				min. Earth dist.	-2571 Jan 25 j 22:00	15° © 13'26	17.27619 AU
conjunction	-2579 Jun 23 j 21:14	9° Ⅱ 28'48	0°14'44	direct	-2571 Apr 11 j 11:46	13° 5 09'19	
minimum elong	-2579 Jun 23 j 21:14	9° Ⅱ 28'48	0°14'48	max. Earth dist.	-2571 Aug 01 j 02:43	17° 5 38'20	19.27583 AU
behind sun begin	-2579 Jun 23 j 18:47	9° Ⅱ 28′26					
behind sun end	-2579 Jun 23 j 23:41	9° Ⅱ 29'10		conjunction	-2571 Aug 02 j 05:14	17° 5 642'32	0°38'55
max. Earth dist.	-2579 Jun 22 j 17:01		19.42829 AU	minimum elong	-2571 Aug 02 j 05:14	17° 5 42'32	0°38'59
retrograde	-2579 Oct 10 j 11:42	13° Ⅱ 51'25		retrograde	-2571 Nov 17 j 14:29	22°505'43	
opposition	-2579 Dec 22 j 20:09	11° Ⅱ 48'54	0°18'23	opposition	-2570 Jan 29 j 23:36	20°903'36	0°44'33
min. Earth dist.	-2579 Dec 23 j 20:56	11° II 46'11	17.41041 AU	min. Earth dist.	-2570 Jan 30 j 22:19	20°901'07	17.27788 AU
direct	-2578 Mar 08 j 14:09	9° Ⅱ 42'53		direct	-2570 Apr 16 j 16:03	17° 9 56'51	
max. Earth dist.	-2578 Jun 27 j 19:35	14° Ⅱ 08'13	19.39310 AU	max. Earth dist.	-2570 Aug 06 j 06:21	22° © 25'50	19.28065 AU
conjunction	-2578 Jun 29 j 01:10			conjunction	-2570 Aug 07 j 07:59	22°529'53	0°40'55
minimum elong	-2578 Jun 29 j 01:10	14° Ⅱ 12'49	0°18'23	minimum elong	-2570 Aug 07 j 07:59	22°529'53	0°40'59
retrograde	-2578 Oct 15 j 11:52	18° Ⅱ 35'50		retrograde	-2570 Nov 22 j 14:11	26°952'46	

•	nical year style is used: Tl		•				age 23
opposition	-2569 Feb 04 j 01:38	-		ming style is the year	-2562 Sep 08 j 09:55	0° m	•
min. Earth dist.	-2569 Feb 04 j 23:52				-2302 Sep 00 j 07.33	עויי	
direct	-2569 Apr 21 j 19:51		17.20000 AC	conjunction	-2562 Sep 14 j 07:27	0° m/22'14	0°46'06
max. Earth dist.	-2569 Aug 11 j 10:26		19 29210 AU	minimum elong	-2562 Sep 14 j 07:27	0° m/22'14	0°46'09
man. Barur dibu	2007 11ug 11 j 10.20	2, 0120,	17.27210110	max. Earth dist.	-2562 Sep 13 j 21:42	-	19.53720 AU
conjunction	-2569 Aug 12 j 10:12	27°916'43	0°42'38	retrograde	-2562 Dec 30 j 04:28	4° Mp 40'51	19.009,20110
minimum elong	-2569 Aug 12 j 10:12			opposition	-2561 Mar 14 j 19:30	2° mp 39'58	0°50'59
8	-2569 Sep 27 j 13:17	0°N		min. Earth dist.	-2561 Mar 15 j 04:20		17.56283 AU
retrograde	-2569 Nov 27 j 14:24	1° Ω 39'14		direct	-2561 May 31 j 01:39	0° m 35'27	
•	-2568 Jan 31 j 08:09	30° ℝ ∽					
opposition	-2568 Feb 09 j 03:53	29°537'14	0°48'23	conjunction	-2561 Sep 19 j 03:57	5° Mp 01'09	0°45'22
min. Earth dist.	-2568 Feb 09 j 23:47	29°535'05	17.30069 AU	minimum elong	-2561 Sep 19 j 03:57	5° m 01'09	0°45'23
direct	-2568 Apr 26 j 01:09	27° © 30'39		max. Earth dist.	-2561 Sep 18 j 19:04	4° ™ 59'46	19.58895 AU
	-2568 Jul 13 j 22:20	$0^{\circ}\Omega$		retrograde	-2560 Jan 04 j 02:19	9° ™ 19'02	
				opposition	-2560 Mar 18 j 20:54	7° Mp 18'16	0°49'58
conjunction	-2568 Aug 16 j 11:44	2° Ω 02'56	0°44'04	min. Earth dist.	-2560 Mar 19 j 03:11	7° ™ 17'36	17.61594 AU
minimum elong	-2568 Aug 16 j 11:44	2° Ω 02'56		direct	-2560 Jun 04 j 03:33	5° Mp 14′06	
max. Earth dist.	-2568 Aug 15 j 13:52	1° Ω 59'28	19.31016 AU				
retrograde	-2568 Dec 01 j 13:04	6° Ω 25′03		conjunction	-2560 Sep 22 j 23:37	9° ™ 38′26	0°44'19
opposition	-2567 Feb 13 j 06:21	4° £ 23′10		minimum elong	-2560 Sep 22 j 23:37	9° ™ 38′26	0°44'21
min. Earth dist.	-2567 Feb 14 j 01:33	4° Ω 21'05	17.32213 AU	max. Earth dist.	-2560 Sep 22 j 17:53	9° m ,37′32	19.64335 AU
direct	-2567 May 01 j 05:01	2° Ω 16'46		retrograde	-2559 Jan 07 j 22:34	13° m 55'31	
				opposition	-2559 Mar 23 j 21:53	11° m 54'51	
conjunction	-2567 Aug 21 j 12:42	6° Ω 48'28		min. Earth dist.	-2559 Mar 24 j 02:47		17.67146 AU
minimum elong	-2567 Aug 21 j 12:42	6° Ω 48'28		direct	-2559 Jun 09 j 04:35	9° m ,51′02	
max. Earth dist.	-2567 Aug 20 j 16:29		19.33495 AU				
retrograde	-2567 Dec 06 j 12:57			conjunction	-2559 Sep 27 j 18:14	-	0°43'00
opposition	-2566 Feb 18 j 08:32	9° Ω 08'23		minimum elong	-2559 Sep 27 j 18:14		0°43'01
min. Earth dist.	-2566 Feb 19 j 01:07		17.34994 AU	max. Earth dist.	-2559 Sep 27 j 13:28		19.70014 AU
direct	-2566 May 06 j 10:11	7° Ω 02'14		retrograde	-2558 Jan 12 j 18:36	18° m 30'09	
	25664 2611210		0045150	opposition	-2558 Mar 28 j 22:03	16° m 29'34	0°47'01
conjunction	-2566 Aug 26 j 13:10			min. Earth dist.	-2558 Mar 29 j 00:40		17.72943 AU
minimum elong	-2566 Aug 26 j 13:10			direct	-2558 Jun 14 j 04:33	14° m 26'05	
max. Earth dist.	-2566 Aug 25 j 19:21		19.365/6 AU	· · · · · · · · · · · · ·	2550 0-4 02 : 12.02	100 m 4712 (0941125
	-2566 Oct 27 j 23:01			conjunction	-2558 Oct 02 j 12:03	18° Mp 47'26	0°41'25
retrograde	-2566 Dec 11 j 11:11 -2565 Jan 26 j 18:59			minimum elong max. Earth dist.	-2558 Oct 02 j 12:03 -2558 Oct 02 j 10:31	18° Mp 47'26	0°41'26 19.75930 AU
annagition			0051126		-2557 Jan 17 j 13:59	•	19.73930 AU
opposition min. Earth dist.	-2565 Feb 23 j 11:03 -2565 Feb 24 j 02:59			retrograde	-2557 Apr 02 j 21:53	-	0045106
direct	-2565 May 11 j 13:24		17.38330 AU	opposition min. Earth dist.	-2557 Apr 02 j 22:34	-	
direct	-2565 Aug 10 j 21:47			direct	-2557 Jun 19 j 05:12		17.78900 AU
	-2303 Aug 10 j 21.47	13 06		direct	-2337 Juli 19 j 03.12	10 III 39 10	
conjunction	-2565 Aug 31 j 12:45	16°Ω17'09	0°46'29	conjunction	-2557 Oct 07 j 04:34	23°m18'56	0°39'36
minimum elong	-2565 Aug 31 j 12:45			minimum elong	-2557 Oct 07 j 04:34		0°39'37
max. Earth dist.	-2565 Aug 30 j 20:15			max. Earth dist.	-2557 Oct 07 j 04:34		
retrograde	-2565 Dec 16 j 10:56		17.10211710	retrograde	-2556 Jan 22 j 07:57		17.02002 110
opposition	-2564 Feb 28 j 13:23		0°51'58	opposition	-2556 Apr 06 j 21:04	25° m 33'01	0°42'55
min. Earth dist.	-2564 Feb 29 j 02:34			min. Earth dist.	-2556 Apr 06 j 19:28		
direct	-2564 May 15 j 18:10			direct	-2556 Jun 23 j 03:38	-	
	, ,				j	•	
conjunction	-2564 Sep 04 j 11:50	21° Ω 00'04	0°46'40	conjunction	-2556 Oct 10 j 20:22	27° m/48′24	0°37'33
minimum elong	-2564 Sep 04 j 11:50			minimum elong	-2556 Oct 10 j 20:22	27° m 48'24	0°37'32
max. Earth dist.	-2564 Sep 03 j 22:09			max. Earth dist.	-2556 Oct 10 j 23:34		19.88496 AU
retrograde	-2564 Dec 20 j 08:32				-2556 Nov 17 j 01:39	0∘ ⊽	
opposition	-2563 Mar 04 j 15:44		0°51'59	retrograde	-2555 Jan 26 j 02:10	2° ჲ 02'03	
min. Earth dist.	-2563 Mar 05 j 04:10	23° Ω 17'32	17.46555 AU	opposition	-2555 Apr 11 j 19:25	0° ჲ 01'41	0°40'30
direct	-2563 May 20 j 20:27			min. Earth dist.	-2555 Apr 11 j 15:21	0° ჲ 02'06	17.91787 AU
					-2555 Apr 12 j 11:40	30°R, Mp	
conjunction	-2563 Sep 09 j 09:55	25° Ω 41'49	0°46'33	direct	-2555 Jun 28 j 03:03	27° m 59'18	
minimum elong	-2563 Sep 09 j 09:55				-2555 Sep 06 j 17:50	0∘ ⊽	
max. Earth dist.	-2563 Sep 08 j 21:13		19.48849 AU		- •		
	-2563 Dec 18 j 21:20	0° m)		conjunction	-2555 Oct 15 j 11:06	2° £ 15'51	0°35'17
retrograde	-2563 Dec 25 j 07:40	0°m/01'10		minimum elong	-2555 Oct 15 j 11:06	2° £ 15'51	0°35'17
	-2563 Dec 31 j 19:47	30° ₹Ω		max. Earth dist.	-2555 Oct 15 j 15:49	2° ≏ 16'34	19.95155 AU
opposition	-2562 Mar 09 j 17:43	28° Ω 00'07	0°51'39	retrograde	-2554 Jan 30 j 18:13	6° ₽ 28'39	
min. Earth dist.	-2562 Mar 10 j 03:30	27° Ω 59'04	17.51262 AU	opposition	-2554 Apr 16 j 17:10	4° £ 28′23	0°37'51
direct	-2562 May 25 j 23:59	25° Ω 55'15		min. Earth dist.	-2554 Apr 16 j 11:07	4° ₽ 29'00	17.98566 AU

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direct	-2554 Jul 02 j 23:19	-		max. Earth dist.	-2547 Nov 19 j 00:55		20.50492 AU
	,			retrograde	-2546 Mar 06 j 12:20		
conjunction	-2554 Oct 20 j 01:03	6° £ 41'21	0°32'49	opposition	-2546 May 22 j 21:49	8°M57'09	0°11'05
minimum elong	-2554 Oct 20 j 01:03	6° £ 41'21	0°32'48	min. Earth dist.	-2546 May 22 j 02:42	8°M59'05	18.53600 AU
max. Earth dist.	-2554 Oct 20 j 08:49	6° £ 42'32	20.02037 AU	direct	-2546 Aug 07 j 15:12	6°M58'31	
retrograde	-2553 Feb 04 j 10:57	10° ჲ 53'18					
opposition	-2553 Apr 21 j 14:11	8° ჲ 53'11	0°35'01	conjunction	-2546 Nov 22 j 13:57	11°ML01'18	0°08'23
min. Earth dist.	-2553 Apr 21 j 05:25	8° ≙ 54'05	18.05526 AU	minimum elong	-2546 Nov 22 j 13:57	11°ML01'18	0°08'21
direct	-2553 Jul 07 j 21:02	6° £ 51'40		behind sun begin	-2546 Nov 22 j 08:11	11°ML00'28	
				behind sun end	-2546 Nov 22 j 19:44	11°ML02'08	
conjunction	-2553 Oct 24 j 14:06	11° ჲ 05'00	0°30'11	max. Earth dist.	-2546 Nov 23 j 10:27	11°ML04'21	20.56623 AU
minimum elong	-2553 Oct 24 j 14:06	11° ≏ 05'00	0°30'11		-2545 Feb 22 j 03:45	15°M₊	
max. Earth dist.	-2553 Oct 24 j 23:26	11° ≏ 06'25	20.09076 AU	retrograde	-2545 Mar 11 j 01:16	15°ML07'11	
retrograde	-2552 Feb 09 j 01:54	15° ≏ 16′09			-2545 Mar 28 j 03:27	15°RM	
opposition	-2552 Apr 25 j 10:38			opposition	-2545 May 27 j 13:03		
min. Earth dist.	-2552 Apr 25 j 00:19	13° ≏ 17'12	18.12631 AU	min. Earth dist.	-2545 May 26 j 15:45	13°ML10'02	18.59570 AU
direct	-2552 Jul 11 j 15:00	11° ≏ 15′05		direct	-2545 Aug 12 j 05:55	11°ML09'32	
					-2545 Nov 23 j 19:31	15°M	
conjunction	-2552 Oct 28 j 02:23	15° ≏ 26'50	0°27'24				
minimum elong	-2552 Oct 28 j 02:23	15° ≏ 26'50	0°27'23	conjunction	-2545 Nov 26 j 21:39	15°ML10'59	0°05'03
max. Earth dist.	-2552 Oct 28 j 14:21	15° ≏ 28'39	20.16217 AU	minimum elong	-2545 Nov 26 j 21:40	15°M10'59	0°05'00
retrograde	-2551 Feb 12 j 17:30	19° ≏ 37'10		behind sun begin	-2545 Nov 26 j 15:18	15°ML10'04	
opposition	-2551 Apr 30 j 06:14	17° ≏ 37'20	0°28'47	behind sun end	-2545 Nov 27 j 04:02	15°ML11'54	
min. Earth dist.	-2551 Apr 29 j 17:18	17° ≏ 38'39	18.19776 AU	max. Earth dist.	-2545 Nov 27 j 19:20	15°MJ4'11	20.62436 AU
direct	-2551 Jul 16 j 10:19	15° ≏ 36'44		retrograde	-2544 Mar 14 j 11:16	19°M16'12	
				min. Earth dist.	-2544 May 30 j 06:16	17°ML19'03	18.65250 AU
conjunction	-2551 Nov 01 j 13:55	19° ≏ 46'55	0°24'28	opposition	-2544 May 31 j 03:33	17°M16'55	0°03'37
minimum elong	-2551 Nov 01 j 13:55	19° ≏ 46'55	0°24'26	direct	-2544 Aug 15 j 16:58	15°M18'49	
max. Earth dist.	-2551 Nov 02 j 03:17	19° ≏ 48'56	20.23354 AU				
retrograde	-2550 Feb 17 j 07:18	23° ≏ 56'27		conjunction	-2544 Nov 30 j 04:47	19°ML18'58	0°01'40
min. Earth dist.	-2550 May 04 j 11:17	21° ≏ 58'10	18.26898 AU	minimum elong	-2544 Nov 30 j 04:46	19°ML18'58	0°01'36
opposition	-2550 May 05 j 01:09	21° ≏ 56'46	0°25'27	behind sun begin	-2544 Nov 29 j 22:14	19°ML18'02	
direct	-2550 Jul 21 j 02:28	19° ≏ 56'36		behind sun end	-2544 Nov 30 j 11:18	19°M19'54	
				max. Earth dist.	-2544 Dec 01 j 03:34	19°M22'20	20.67979 AU
conjunction	-2550 Nov 06 j 00:52	24° £ 05'15	0°21'25	retrograde	-2543 Mar 18 j 22:57	23°M23'33	
minimum elong	-2550 Nov 06 j 00:52	24° ≏ 05'15	0°21'23	desc. node	-2543 May 25 j 11:44	21°ML48'41	
max. Earth dist.	-2550 Nov 06 j 16:18	24° ჲ 07'34	20.30432 AU	opposition	-2543 Jun 04 j 17:05	21°M24'16	0°00'-5
retrograde	-2549 Feb 21 j 22:05	28° ≙ 14'01		min. Earth dist.	-2543 Jun 03 j 17:42	21°M26'36	18.70658 AU
opposition	-2549 May 09 j 19:24	26° ≏ 14'28	0°21'59	direct	-2543 Aug 20 j 05:59	19°M26'24	
min. Earth dist.	-2549 May 09 j 03:03	26° ≏ 16'07	18.33906 AU				
direct	-2549 Jul 25 j 19:55	24° ≏ 14'44		conjunction	-2543 Dec 04 j 11:20	23°M25'22	0°-1'-47
				minimum elong	-2543 Dec 04 j 11:20	23°M25'22	0°01'51
conjunction	-2549 Nov 10 j 10:59	28° ≏ 21'51	0°18'15	behind sun begin	-2543 Dec 04 j 04:48	23°M24'26	
minimum elong	-2549 Nov 10 j 10:59	28° ≏ 21'51	0°18'13	behind sun end	-2543 Dec 04 j 17:52	23°M26'18	
max. Earth dist.	-2549 Nov 11 j 03:41	28° ≏ 24'21	20.37352 AU	max. Earth dist.	-2543 Dec 05 j 11:24	23°M28'54	20.73248 AU
	-2549 Dec 08 j 08:48	0° M		retrograde	-2542 Mar 23 j 08:08	27°M29'23	
retrograde	-2548 Feb 26 j 10:58	2°M29'53		min. Earth dist.	-2542 Jun 08 j 06:37	25°M32'26	18.75819 AU
opposition	-2548 May 13 j 13:06	0°M30'26	0°18'25	opposition	-2542 Jun 09 j 05:59	25°M30'05	0°-3'-47
min. Earth dist.	-2548 May 12 j 20:17	0°M32'08	18.40738 AU	direct	-2542 Aug 24 j 15:20	23°M32'28	
	-2548 May 26 j 05:18	30° ₹ Ω					
direct	-2548 Jul 29 j 10:22	28° ≙ 31'06		conjunction	-2542 Dec 08 j 17:29	27°M30'19	0°-5'-7
	-2548 Sep 27 j 15:47	0° M		minimum elong	-2542 Dec 08 j 17:29	27°M30'19	0°05'12
				behind sun begin	-2542 Dec 08 j 11:08	27°M29'25	
conjunction	-2548 Nov 13 j 20:40	2°M36'44	0°15'01	behind sun end	-2542 Dec 08 j 23:49	27°ML31'13	
minimum elong	-2548 Nov 13 j 20:41	2°M36'44	0°14'59	max. Earth dist.	-2542 Dec 09 j 18:32	27°ML33'59	20.78297 AU
behind sun begin	-2548 Nov 13 j 18:02	2°M36'21			-2541 Jan 23 j 12:52	0° ∡ ¹	
behind sun end	-2548 Nov 13 j 23:19	2°M37'07		retrograde	-2541 Mar 27 j 18:53	1° ∡ ³33'49	
max. Earth dist.	-2548 Nov 14 j 14:54	2°M39'28	20.44066 AU		-2541 Jun 03 j 01:49	30°RML	
retrograde	-2547 Mar 02 j 00:55	6°M44'01		opposition	-2541 Jun 13 j 18:08	29°M34'33	0°-7'-26
min. Earth dist.	-2547 May 17 j 10:40		18.47316 AU	min. Earth dist.	-2541 Jun 12 j 16:41		18.80752 AU
opposition	-2547 May 18 j 05:41	4°M44'40		direct	-2541 Aug 29 j 02:29	27°M37'11	
direct	-2547 Aug 03 j 02:24	2°M45'41			-2541 Nov 15 j 10:32	0° ∡ ¹	
	5 . 3				. 3		
conjunction	-2547 Nov 18 j 05:40	6° ™ 49'53	0°11'43	conjunction	-2541 Dec 12 j 23:10	1° ∡ ³34′00	0°-8'-22
minimum elong	-2547 Nov 18 j 05:40	6°M49'53	0°11'41	minimum elong	-2541 Dec 12 j 23:11	1° х 34′00	0°08'27
behind sun begin	-2547 Nov 18 j 00:58	6°M49'12		behind sun begin	-2541 Dec 12 j 17:25	1° х ³33'11	•
behind sun end	-2547 Nov 18 j 10:22	6°M50'34		behind sun end	-2541 Dec 13 j 04:56	1° х 334'49	
	10 j 10.22	- 110000T		Juli Viiu			

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		-		unting style is the year	2542 BCE in historical of		
max. Earth dist.	-2541 Dec 14 j 01:27		20.83099 AU		-2533 Oct 25 j 19:26	5°0	
retrograde	-2540 Mar 31 j 04:00	5° ∡ ³37'04					
min. Earth dist.	-2540 Jun 16 j 04:32	3° ∡ ¹40'22	18.85436 AU	conjunction	-2532 Jan 13 j 15:56	3° る 35'26	0°-31'-28
opposition	-2540 Jun 17 j 05:48	3° ∡ ³37′50	0°-11'-2	minimum elong	-2532 Jan 13 j 15:56	3°₹35′26	
direct	-2540 Sep 01 j 10:41	1° ∡ ¹40'43		max. Earth dist.	-2532 Jan 14 j 19:31		21.08345 AU
				retrograde	-2532 May 03 j 01:20	7° る 36'47	
conjunction	-2540 Dec 16 j 04:42		0°-11'-35	min. Earth dist.	-2532 Jul 19 j 06:38		19.08896 AU
minimum elong	-2540 Dec 16 j 04:42	5° ∡ ¹36'37	0°11'40	opposition	-2532 Jul 20 j 07:46	5° ප 37'40	0°-36'-5
behind sun begin	-2540 Dec 16 j 00:00	5° ∡ ¹35'57		direct	-2532 Oct 03 j 18:57	3°₹41'45	
behind sun end	-2540 Dec 16 j 09:24	5° ∡ ³37'17					
max. Earth dist.	-2540 Dec 17 j 07:34		20.87652 AU	conjunction	-2531 Jan 16 j 21:04		0°-33'-47
retrograde	-2539 Apr 04 j 14:13	9° ∡ ³39'17		minimum elong	-2531 Jan 16 j 21:04	7° る 33'17	
opposition	-2539 Jun 21 j 16:30	7° ∡ ¹40'06	0°-14'-33	max. Earth dist.	-2531 Jan 17 j 23:44		21.09228 AU
min. Earth dist.	-2539 Jun 20 j 13:35		18.89843 AU	retrograde	-2531 May 07 j 10:22		
direct	-2539 Sep 05 j 19:47	5° ∡ ¹43'14		opposition	-2531 Jul 24 j 14:57	9° ප 35'22	
				min. Earth dist.	-2531 Jul 23 j 13:44		19.09515 AU
conjunction	-2539 Dec 20 j 09:55	9° ∡ ³38'18	0°-14'-43	direct	-2531 Oct 08 j 01:11	7° る 39'24	
minimum elong	-2539 Dec 20 j 09:55	9° ∡ ³38'18	0°14'48				
behind sun begin	-2539 Dec 20 j 07:09	9° ∡ ³37'54		conjunction	-2530 Jan 21 j 02:13		
behind sun end	-2539 Dec 20 j 12:41	9° ∡ ³38'41		minimum elong	-2530 Jan 21 j 02:13	11° る 30'45	0°36'00
max. Earth dist.	-2539 Dec 21 j 13:42	9° ∡¹ 42'20	20.91894 AU	max. Earth dist.	-2530 Jan 22 j 04:46	11° る 34'33	21.09592 AU
retrograde	-2538 Apr 08 j 22:36	13° ∡ ′40′38		retrograde	-2530 May 11 j 16:24	15° る 32'05	
min. Earth dist.	-2538 Jun 25 j 00:33	11° ∡ ¹44'10	18.93926 AU	opposition	-2530 Jul 28 j 22:02	13° る 32'44	0°-40'-49
opposition	-2538 Jun 26 j 02:59	11° ∡ ′41′31	0°-18'00	min. Earth dist.	-2530 Jul 27 j 22:10	13° る 35'08	19.09648 AU
direct	-2538 Sep 10 j 03:23	9° ∡ ¹44'55		direct	-2530 Oct 12 j 05:42	11° ට 36'42	
conjunction	-2538 Dec 24 j 14:52	13° ₹ ³39'12	0°-17'-47	conjunction	-2529 Jan 25 j 07:22	15° る 27'57	0°-37'-53
minimum elong	-2538 Dec 24 j 14:52	13° ₹ ³39'12	0°17'52	minimum elong	-2529 Jan 25 j 07:22	15° る 27'57	0°37'59
max. Earth dist.	-2538 Dec 25 j 18:57	13° ∡ ¹43'16	20.95806 AU	max. Earth dist.	-2529 Jan 26 j 09:04	15° る 31'36	21.09514 AU
retrograde	-2537 Apr 13 j 08:55	17° ∡ ¹41'17		retrograde	-2529 May 16 j 01:04	19° る 29'21	
min. Earth dist.	-2537 Jun 29 j 09:09	15° ∡¹ 44'59	18.97647 AU	min. Earth dist.	-2529 Aug 01 j 04:45	17° る 32'17	19.09360 AU
opposition	-2537 Jun 30 j 12:52	15° ∡ ¹42'13	0°-21'-20	opposition	-2529 Aug 02 j 04:43	17° る 29'53	0°-42'-53
direct	-2537 Sep 14 j 11:04	13° ∡ ¹45'49		direct	-2529 Oct 16 j 11:10	15° ට 33'44	
conjunction	-2537 Dec 28 j 19:52	17° ∡ ³39′28	0°-20'-46	conjunction	-2528 Jan 29 j 12:55	19° පි 25'01	0°-39'-40
minimum elong	-2537 Dec 28 j 19:52	17° ∡ ³39′28	0°20'51	minimum elong	-2528 Jan 29 j 12:55	19° පි 25'01	0°39'44
max. Earth dist.	-2537 Dec 30 j 00:31	17° ∡¹ 43'36	20.99311 AU	max. Earth dist.	-2528 Jan 30 j 14:24	19° る 28'38	21.09013 AU
retrograde	-2536 Apr 16 j 16:26	21° ∡ ′41'19		retrograde	-2528 May 19 j 07:45	23° る 26'32	
opposition	-2536 Jul 03 j 22:15	19° ∡ ¹42'18	0°-24'-34	opposition	-2528 Aug 05 j 11:05	21° る 26'58	0°-44'-45
min. Earth dist.	-2536 Jul 02 j 19:29	19° ∡¹ 44'59	19.00941 AU	min. Earth dist.	-2528 Aug 04 j 12:32	21° ට 29'14	19.08667 AU
direct	-2536 Sep 17 j 18:00	17° ∡ ¹46′06		direct	-2528 Oct 19 j 15:08	19° る 30'45	
conjunction	-2535 Jan 01 j 00:53	21° х 39'10	0°-23'-38	conjunction	-2527 Feb 01 j 18:42	23° පි 22'08	0°-41'-16
minimum elong	-2535 Jan 01 j 00:53	21° х 39'10	0°23'43	minimum elong	-2527 Feb 01 j 18:42	23° る 22'08	0°41'21
max. Earth dist.	-2535 Jan 02 j 05:13	21° ∡¹ 43'16	21.02375 AU	max. Earth dist.	-2527 Feb 02 j 19:02	23° る 25'36	21.08140 AU
retrograde	-2535 Apr 21 j 02:41	25° ∡ ¹40'51		retrograde	-2527 May 23 j 16:24	27° る 23'52	
min. Earth dist.	-2535 Jul 07 j 03:40	23° ∡¹ 44'36	19.03756 AU	opposition	-2527 Aug 09 j 17:18	25° ට 24'12	0°-46'-25
opposition	-2535 Jul 08 j 07:09	23° х 41'51	0°-27'-40	min. Earth dist.	-2527 Aug 08 j 18:49	25° පි 26'28	19.07607 AU
direct	-2535 Sep 22 j 01:02	21° ∡ °45'48		direct	-2527 Oct 23 j 19:59	23° る 27'53	
conjunction	-2534 Jan 05 j 05:48	25° х 38′23	0°-26'-23	conjunction	-2526 Feb 06 j 00:39	27° る 19'29	0°-42'-41
minimum elong	-2534 Jan 05 j 05:48	25° х 38′23	0°26'29	minimum elong	-2526 Feb 06 j 00:39	27° る 19'29	0°42'44
max. Earth dist.	-2534 Jan 06 j 10:15	25° ∡ ¹42'28	21.04914 AU	max. Earth dist.	-2526 Feb 07 j 00:40	27° ප 22'54	21.06886 AU
retrograde	-2534 Apr 25 j 09:25	29° ∡ ³39'55			-2526 Mar 29 j 08:15	0° ≈	
opposition	-2534 Jul 12 j 15:47	27° ∡ ¹40'56	0°-30'-38	retrograde	-2526 May 27 j 23:46	1° ≈ 21'30	
min. Earth dist.	-2534 Jul 11 j 13:32	27° ∡ ¹43'33	19.06030 AU		-2526 Jul 28 j 22:30	30°Ŗる	
direct	-2534 Sep 26 j 07:01	25° ∡¹ 44'58		opposition	-2526 Aug 13 j 23:33	29° ට 21'46	0°-47'-51
				min. Earth dist.	-2526 Aug 13 j 02:29		
conjunction	-2533 Jan 09 j 10:52	29° ∡ ³37′08	0°-29'00	direct	-2526 Oct 27 j 23:45		
minimum elong	-2533 Jan 09 j 10:51				-2525 Jan 18 j 06:43	0° ≈	
max. Earth dist.	-2533 Jan 10 j 14:36				·		
	-2533 Jan 16 j 02:19			conjunction	-2525 Feb 10 j 07:11	1° ≈ 17'18	0°-43'-53
retrograde	-2533 Apr 29 j 19:15			minimum elong	-2525 Feb 10 j 07:11	1° ≈ 17'18	
opposition	-2533 Jul 16 j 23:55	1° る 39'31	0°-33'-27	max. Earth dist.	-2525 Feb 11 j 05:49	1°≈20′32	21.05281 AU
•	-2533 Jul 16 j 23:55 -2533 Jul 15 j 21:20		0°-33'-27 19.07750 AU	max. Earth dist. retrograde	-2525 Feb 11 J 05:49 -2525 Jun 01 J 09:06	1°≈20'32 5°≈19'39	21.03281 AU
opposition		1° る 42'11				5° ≈ 19'39	19.04374 AU
opposition	-2533 Jul 15 j 21:20	1° ব্ 42'11 30°Ŗ ৵		retrograde	-2525 Jun 01 j 09:06	5° ≈ 19'39	19.04374 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 26 Attention, astronomical year style is used: The year -2525 in astronomical counting style is the year 2526 BCE in historical counting style.

-	nical year style is used: Tl		•	` //			age 20
direct	-2525 Nov 01 j 04:28	-	in astronomicai co	retrograde	-2517 Jul 04 j 18:09		-
direct	-2323 NOV 01 J 04.26	1 23 22		_	-2517 Sep 19 j 11:16		0° 50' 4
:	2524 E-b 14 : 14.15	590015145	09 441 52	opposition	1 3		18.73972 AU
conjunction	-2524 Feb 14 j 14:15		0°-44'-53	min. Earth dist.	-2517 Sep 19 j 03:54		18.73972 AU
minimum elong	-2524 Feb 14 j 14:15	5°≈15'45		direct	-2517 Dec 02 j 23:58	3°π40'00	
max. Earth dist.	-2524 Feb 15 j 12:15		21.03287 AU		2516M 10:21.27	70 1/ 20152	00 441 40
retrograde	-2524 Jun 04 j 17:05	9°≈18'30	00.501.4	conjunction	-2516 Mar 18 j 21:27		0°-44'-48
opposition	-2524 Aug 21 j 11:50	7°≈18'40		minimum elong	-2516 Mar 18 j 21:27	7°\(\)38'53	0°44'51
min. Earth dist.	-2524 Aug 20 j 16:57		19.02177 AU	max. Earth dist.	-2516 Mar 19 j 05:01		20.71168 AU
direct	-2524 Nov 04 j 08:21	5° ≈ 22'05		retrograde	-2516 Jul 08 j 05:14		00 401 1
	0500 F. I. 17:01 40	0015100	00 451 40	opposition	-2516 Sep 22 j 18:59	9°) (45'28	18.68310 AU
conjunction	-2523 Feb 17 j 21:49	9°≈15'00		min. Earth dist.	-2516 Sep 22 j 13:32		18.68310 AU
minimum elong	-2523 Feb 17 j 21:49	9°≈15'00	0°45'45	direct	-2516 Dec 06 j 06:56	7°) 46′52	
max. Earth dist.	-2523 Feb 18 j 18:01		21.00895 AU		2515 16 22 10 16	1101/4650	00 421 44
retrograde	-2523 Jun 09 j 03:18	13°≈18'13	00 501 50	conjunction	-2515 Mar 23 j 10:16		
opposition	-2523 Aug 25 j 18:00	11°≈18'20		minimum elong	-2515 Mar 23 j 10:16		
min. Earth dist.	-2523 Aug 24 j 23:57		18.99568 AU	max. Earth dist.	-2515 Mar 23 j 15:04		20.65392 AU
direct	-2523 Nov 08 j 13:19	9° ≈ 21'38		retrograde	-2515 Jul 12 j 18:24		
				opposition	-2515 Sep 27 j 03:00		
conjunction	-2522 Feb 22 j 06:04	13° ≈ 15'12		min. Earth dist.	-2515 Sep 26 j 23:01		18.62426 AU
minimum elong	-2522 Feb 22 j 06:04			direct	-2515 Dec 10 j 15:10	11° ∺ 55′00	
max. Earth dist.	3		20.98058 AU				
	-2522 Mar 25 j 21:10			conjunction	-2514 Mar 28 j 00:02		
retrograde	-2522 Jun 13 j 11:52			minimum elong	-2514 Mar 28 j 00:02		
min. Earth dist.	-2522 Aug 29 j 08:26			max. Earth dist.	-2514 Mar 28 j 03:51		20.59408 AU
opposition	-2522 Aug 30 j 00:26		0°-51'-21	retrograde	-2514 Jul 17 j 06:27		
	-2522 Sep 06 j 19:12			opposition	-2514 Oct 01 j 11:25		
direct	-2522 Nov 12 j 17:42			min. Earth dist.	-2514 Oct 01 j 09:08		18.56358 AU
	-2521 Jan 15 j 07:15	15° ≈		direct	-2514 Dec 14 j 22:38	16°) €04'34	
conjunction	-2521 Feb 26 j 14:53			conjunction	-2513 Apr 01 j 14:29		0°-40'-55
minimum elong	-2521 Feb 26 j 14:53			minimum elong	-2513 Apr 01 j 14:29		0°40'57
max. Earth dist.	-2521 Feb 27 j 07:50		20.94760 AU	max. Earth dist.	-2513 Apr 01 j 15:25		20.53282 AU
retrograde	-2521 Jun 17 j 22:54	21° ≈ 20'42		retrograde	-2513 Jul 21 j 20:48		
opposition	-2521 Sep 03 j 07:01	19° ≈ 20'43	0°-51'-36	opposition	-2513 Oct 05 j 20:22		
min. Earth dist.	-2521 Sep 02 j 16:19		18.92946 AU	min. Earth dist.	-2513 Oct 05 j 19:40		18.50169 AU
direct	-2521 Nov 16 j 23:12	17° ≈ 23'40		direct	-2513 Dec 19 j 08:21	20°) 15'41	
conjunction	-2520 Mar 02 j 00:35			conjunction	-2512 Apr 05 j 05:59		
minimum elong	-2520 Mar 02 j 00:35			minimum elong	-2512 Apr 05 j 05:59		
max. Earth dist.	-2520 Mar 02 j 16:08		20.90945 AU	max. Earth dist.	-2512 Apr 05 j 05:58		20.47030 AU
retrograde	-2520 Jun 21 j 08:20			retrograde	-2512 Jul 25 j 09:52		
opposition	-2520 Sep 06 j 13:43			opposition	-2512 Oct 09 j 05:43		
min. Earth dist.	-2520 Sep 06 j 01:17		18.88872 AU	min. Earth dist.	-2512 Oct 09 j 06:38		18.43865 AU
direct	-2520 Nov 20 j 04:34	21° ≈ 26′12		direct	-2512 Dec 22 j 17:14	24° ¥ 28'31	
conjunction	-2519 Mar 06 j 10:48		0°-46'-35	conjunction	-2511 Apr 09 j 22:11		0°-37'-11
minimum elong	-2519 Mar 06 j 10:48		0°46'38	minimum elong	-2511 Apr 09 j 22:11		0°37'12
max. Earth dist.	-2519 Mar 06 j 23:38		20.86638 AU	max. Earth dist.	-2511 Apr 09 j 19:08		20.40698 AU
retrograde	-2519 Jun 25 j 19:42				-2511 May 04 j 23:57	0° Υ	
opposition	-2519 Sep 10 j 20:43			retrograde	-2511 Jul 30 j 01:04		
min. Earth dist.	-2519 Sep 10 j 09:43		18.84320 AU	opposition	-2511 Oct 13 j 15:48	0° Y 43'34	
direct	-2519 Nov 24 j 10:38	25° ≈ 29'45		min. Earth dist.	-2511 Oct 13 j 18:30		18.37494 AU
					-2511 Oct 31 j 04:19		
conjunction	-2518 Mar 10 j 21:34		0°-46'-14	direct	-2511 Dec 27 j 04:01		
minimum elong	-2518 Mar 10 j 21:34	29° ≈ 26'35	0°46'17		-2510 Feb 20 j 15:25	0° Y	
max. Earth dist.	-2518 Mar 11 j 09:06		20.81857 AU				
	-2518 Mar 20 j 15:08	0° ∀		conjunction	-2510 Apr 14 j 15:22	2° Y 49'55	0°-34'-59
retrograde	-2518 Jun 30 j 05:59	3°) 32'38		minimum elong	-2510 Apr 14 j 15:22	2° Y 49'55	0°35'01
opposition	-2518 Sep 15 j 03:57		0°-50'-50	max. Earth dist.	-2510 Apr 14 j 11:27		20.34282 AU
min. Earth dist.	-2518 Sep 14 j 19:03	1° ∺ 33'09	18.79323 AU	retrograde	-2510 Aug 03 j 15:51	7° Y ′02′03	
	-2518 Oct 27 j 19:41	30° R ≈		opposition	-2510 Oct 18 j 02:28		0°-37'-29
direct	-2518 Nov 28 j 17:02	29° ≈ 34'21		min. Earth dist.	-2510 Oct 18 j 06:48		18.31027 AU
	-2518 Dec 30 j 04:01	0° \		direct	-2510 Dec 31 j 15:09	2° Y 59'48	
conjunction	-2517 Mar 15 j 09:06	3° ¥ 32′09	0°-45'-38	conjunction	-2509 Apr 19 j 09:34	7° Y ′08'04	0°-32'-35
minimum elong	-2517 Mar 15 j 09:06	3°) 32′09	0°45'41	minimum elong	-2509 Apr 19 j 09:34	7° Υ 08'04	0°32'35
max. Earth dist.	-2517 Mar 15 j 17:53	3° ∺ 33'25	20.76684 AU	max. Earth dist.	-2509 Apr 19 j 02:16	7 °'Y'07'00	20.27776 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2509 in astronomical counting style is the year 2510 BCE in historical counting style. -2509 Aug 08 i 07:44 11°**Υ**'21'05 conjunction -2501 May 26 j 18:28 12°**8**42'57 retrograde -2509 Oct 22 j 13:44 9°**Y**19′27 0°-34'-42 minimum elong -2501 May 26 j 18:28 12°**8**42'57 0°07'06 opposition min. Earth dist. -2509 Oct 22 j 20:21 9°Υ18'45 18.24470 AU -2501 May 26 j 12:13 12°842'02 behind sun begin -2508 Jan 05 j 03:04 7°**Y**18'24 -2501 May 27 j 00:43 12°843'53 direct behind sun end -2501 May 25 j 18:43 12°**8**39'21 19.73716 AU max. Earth dist. -2508 Apr 23 j 04:58 11°**Υ**'28'16 0°-29'-58 -2501 Jul 05 j 05:04 15°8 conjunction -2508 Apr 23 j 04:58 11°**Υ**28'16 0°29'59 -2501 Sep 13 j 10:27 17°**8**02'18 minimum elong retrograde -2501 Nov 26 j 10:14 14°**8**59'49 -2508 Apr 22 j 20:28 11°**Y**27'01 20.21152 AU max. Earth dist. opposition 0°-5'-51 -2508 Aug 12 j 00:32 15°**Y**42'08 -2501 Nov 26 j 08:34 15°R**୪** retrograde -2501 Nov 27 j 06:37 14°857'36 17.70614 AU opposition -2508 Oct 26 j 01:51 13°**Y**40'27 0°-31'-42 min. Earth dist. min. Earth dist. -2508 Oct 26 j 10:05 13°**Υ**39'34 18.17780 AU direct -2500 Feb 09 j 14:24 12°**8**55'27 -2507 Jan 08 j 16:38 11°**Y**39'02 -2500 Apr 21 j 05:53 15°8 direct conjunction -2507 Apr 28 j 00:54 15°**Y**50'28 0°-27'-9 conjunction -2500 May 30 j 19:46 17°**8**17'49 minimum elong -2507 Apr 28 j 00:54 15°**Υ**'50'28 0°27'09 minimum elong -2500 May 30 j 19:47 17°**8**17'49 0°03'25 max. Earth dist. -2507 Apr 27 j 12:51 15°**Υ**48'41 20.14403 AU behind sun begin -2500 May 30 j 13:02 17°**8**16'49 retrograde -2507 Aug 16 j 17:01 20°**℃**05'13 behind sun end -2500 May 31 j 02:31 17°**8**18'49 opposition -2507 Oct 30 j 14:44 18°**Y**03'25 0°-28'-30 max. Earth dist. -2500 May 29 j 19:18 17°**8**14'06 19.67587 AU min. Earth dist. -2507 Oct 31 j 01:22 18° Υ 02'17 18.10981 AU retrograde -2500 Sep 17 j 08:39 21°837'50 direct -2506 Jan 13 j 06:12 16°**Υ**01'37 opposition -2500 Nov 30 j 04:05 19°**8**35'17 min. Earth dist. -2500 Dec 01 j 00:26 19°\begin{align*} 33'04 17.64669 AU conjunction -2506 May 02 j 22:02 20°**Υ**'14'39 0°-24'-10 direct -2499 Feb 13 j 11:27 17° 830'34 minimum elong -2506 May 02 j 22:02 20°**Y**14'39 0°24'10 asc. node -2499 May 03 j 10:57 19°**8**59'05 max. Earth dist. $-2506 \text{ May } 02 \text{ j } 08:46 \quad 20^{\circ} \Upsilon 12'41 \quad 20.07548 \text{ AU}$ retrograde -2506 Aug 21 j 11:13 24° γ'30'12 conjunction -2499 Jun 04 i 21:25 21°**8**54'22 0°00'21 -2506 Nov 04 j 04:08 22°**Y**28'19 -2499 Jun 04 j 21:27 21°**8**54'22 0°00'24 opposition 0°-25'-5 minimum elong -2506 Nov 04 j 16:11 22°Υ27'01 18.04081 AU behind sun begin -2499 Jun 04 j 14:41 21°**8**53'22 min Earth dist -2505 Jan 17 j 22:06 20°**Y**26'06 -2499 Jun 05 j 04:12 21°**8**55'22 direct behind sun end -2499 Jun 03 j 19:40 21°850'26 19.61831 AU max. Earth dist. -2505 May 07 j 19:52 24°**Υ**'40'43 0°-21'00 -2499 Sep 22 j 05:32 26°815'02 conjunction retrograde -2505 May 07 j 19:53 24°**Υ**'40'43 0°21'00 -2499 Dec 04 j 22:51 24°812'27 opposition 0°02'26 minimum elong -2505 May 07 j 03:07 24° **Y** 38'13 20.00625 AU-2499 Dec 05 j 20:59 24°**8**10'01 17.59136 AU max. Earth dist. min. Earth dist. -2498 Feb 18 j 06:41 22°**8**07'24 -2505 Aug 26 j 04:25 28°**Y**57'06 direct retrograde -2505 Nov 08 j 18:24 26°**Y**55'05 0°-21'-30 opposition -2505 Nov 09 j 08:57 26°**Y**53'30 17.97153 AU -2498 Jun 09 j 23:51 26°\(\mathbf{2}32'36\) 0°04'09 min. Earth dist. conjunction -2504 Jan 22 j 13:30 24°**Y** 52'25 -2498 Jun 09 j 23:51 26°\(\begin{center} 232'36 \] 0°04'11 direct minimum elong -2498 Jun 09 j 17:10 26°**8**31'36 behind sun begin conjunction -2504 May 11 j 18:34 29°**Y**08'38 0°-17'-42 behind sun end -2498 Jun 10 j 06:31 26°833'36 minimum elong -2504 May 11 j 18:34 29°**Υ**08'38 0°17'41 max. Earth dist. -2498 Jun 08 j 21:15 26°828'31 19.56521 AU max. Earth dist. -2504 May 11 j 00:45 29°**Υ**05'58 19.93700 AU -2498 Aug 13 j 07:32 $\Pi^{\circ}0$ -2504 May 26 j 02:53 0° 8 retrograde -2498 Sep 27 j 05:01 0°**I**53′52 -2504 Aug 29 j 23:48 3°**8**25'47 -2498 Nov 11 j 22:27 30°R8 retrograde -2504 Nov 12 j 09:13 1°**8**23'39 0°-17'-46 -2498 Dec 09 j 18:06 28°\(\delta 51'17 \) 0°06'37 opposition opposition min. Earth dist. -2504 Nov 13 j 00:43 1°**8**21'58 17.90252 AU min. Earth dist. -2498 Dec 10 j 16:01 28°848'53 17.54048 AU -2504 Dec 17 j 20:46 30°RY direct -2497 Feb 23 j 05:30 26°845'58 $-2503 \text{ Jan } 26 \text{ j } 07:35 \quad 29^{\circ} \Upsilon 20'33$ direct -2497 May 26 i 06:59 $\Pi^{\circ}0$ -2503 Mar 06 i 05:16 0°8 max. Earth dist. -2497 Jun 13 i 23:36 1°**Д**08'19 19.51652 AU -2503 May 16 j 17:49 -2497 Jun 15 i 02:52 conjunction 3°**8**38'20 0°-14'-16 conjunction 1°**I**12'31 0°07'52 minimum elong minimum elong -2503 May 16 i 17:49 3°**8**38'20 0°14'16 -2497 Jun 15 i 02:51 1°**Ⅱ**12'31 0°07'56 behind sun begin -2503 May 16 i 14:52 3°837'54 behind sun begin -2497 Jun 14 i 20:48 1°**Ⅱ**11'37 behind sun end -2503 May 16 j 20:46 3°**8**38'46 -2497 Jun 15 j 08:55 1°**Ⅱ**13′26 behind sun end max. Earth dist. -2503 May 15 j 21:08 3°**8**35'14 19.86850 AU retrograde -2497 Oct 02 j 02:46 5°**Ⅲ**34'19 -2503 Sep 03 j 17:59 7°**8**56'15 3°**Д**31'47 0°10'46 retrograde opposition -2497 Dec 14 j 14:26 3°**Д**29'12 17.49412 AU opposition -2503 Nov 17 j 00:51 5°**8**53'59 0°-13'-53 min. Earth dist. -2497 Dec 15 j 14:03 -2503 Nov 17 j 18:40 -2496 Feb 28 j 02:15 min. Earth dist. 5°**8**52'03 17.83484 AU direct 1°**I**I26′15 -2502 Jan 31 j 00:27 direct 3°**8**50'26 max. Earth dist. -2496 Jun 18 j 01:48 5°**Ⅱ**49'40 19.47240 AU -2502 May 21 j 17:48 8°809'47 0°-10'-45 -2496 Jun 19 j 06:07 5°II54'03 0°11'35 conjunction conjunction -2502 May 21 j 17:48 8°**8**09'47 0°10'42 -2496 Jun 19 j 06:07 5°**Ⅱ**54'03 0°11'38 minimum elong minimum elong 8°**8**09'01 -2496 Jun 19 j 01:22 5°**Ⅱ**53′20 behind sun begin -2502 May 21 j 12:39 behind sun begin behind sun end -2502 May 21 j 22:57 8°**8**10'32 behind sun end -2496 Jun 19 j 10:51 5°**I**I54'46 max. Earth dist. -2502 May 20 j 20:17 8°**8**06'32 19.80171 AU retrograde -2496 Oct 06 j 02:47 10° **II**16'21 retrograde -2502 Sep 08 j 14:45 12°**8**28'26 opposition -2496 Dec 18 j 11:25 8°**Ⅲ**13'51 0°14'53 opposition -2502 Nov 21 j 17:08 10°**8**26'03 0°-9'-55 min. Earth dist. -2496 Dec 19 j 10:44 8°**Ⅱ**11'18 17.45220 AU min. Earth dist. -2502 Nov 22 j 11:25 10°824'04 17.76908 AU -2495 Mar 04 j 03:09 6°**Ⅱ**08'08 direct -2501 Feb 04 j 20:06 8°**8**22'05 max. Earth dist. -2495 Jun 23 j 05:40 10°**Д**32'41 19.43251 AU direct

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2495 in astronomical counting style is the year 2496 BCE in historical counting style. -2495 Jun 24 j 09:58 10°**Д**37'05 0°15'14 conjunction -2487 Aug 02 j 18:02 18°549'55 0°39'07 conjunction -2495 Jun 24 j 09:57 10°**Ⅲ**37'05 -2487 Aug 02 j 18:02 18°549'55 0°39'11 minimum elong 0°15'18 minimum elong -2495 Jun 24 j 08:12 10°**II**36'49 -2487 Aug 01 j 15:50 18°545'46 19.27597 AU behind sun begin max. Earth dist. -2487 Nov 18 j 03:15 23°513'00 -2495 Jun 24 j 11:42 10°**Ⅲ**37'21 behind sun end retrograde -2495 Oct 11 j 01:11 14° **1**59'48 -2486 Jan 30 j 12:30 21°5510'49 0°44'44 retrograde opposition -2495 Dec 23 j 09:15 12°**Д**57'22 0°18'56 opposition min. Earth dist. -2486 Jan 31 j 11:08 21°508'21 17.27842 AU -2495 Dec 24 j 10:04 12°**Ц**54'39 17.41450 AU -2486 Apr 17 j 05:49 19°504'01 min. Earth dist. direct direct -2494 Mar 09 j 02:02 10°**Ⅲ**51'27 max. Earth dist. -2494 Jun 28 j 08:18 15°**Ⅱ**16'48 19.39686 AU conjunction -2486 Aug 07 j 20:46 23°536'58 0°41'04 minimum elong -2486 Aug 07 j 20:46 23°536'58 0°41'07 conjunction -2494 Jun 29 j 14:00 15°**Ⅲ**21'26 0°18'48 max. Earth dist. -2486 Aug 06 j 19:21 23°532'57 19.28165 AU -2494 Jun 29 j 14:00 15°**Ⅲ**21'26 -2486 Nov 23 j 02:23 27°559'48 minimum elong 0°18'53 retrograde -2494 Oct 16 j 01:36 19°**Ⅲ**44'30 -2485 Feb 04 j 14:36 25°557'41 retrograde opposition 0°46'45 opposition -2494 Dec 28 j 07:47 17°**Ц**42'06 0°22'52 min. Earth dist. -2485 Feb 05 j 12:32 25°55'18 17.28755 AU min. Earth dist. -2494 Dec 29 j 08:20 17°**Ц**39'25 17.38090 AU direct -2485 Apr 22 j 08:42 23°550'58 direct -2493 Mar 14 j 05:17 15°**Ⅲ**36'01 conjunction -2485 Aug 12 j 22:56 28°523'39 0°42'44 conjunction -2493 Jul 04 j 18:27 20°**Д**06'53 0°22'16 minimum elong -2485 Aug 12 j 22:56 28°523'39 0°42'47 minimum elong -2493 Jul 04 j 18:27 20°**Ⅲ**06'53 0°22'20 max. Earth dist. -2485 Aug 11 j 23:34 28°\$19'57 19.29420 AU max. Earth dist. -2493 Jul 03 j 13:19 20°**Д**02'20 19.36516 AU -2485 Sep 07 j 20:36 $0^{\circ}\Omega$ retrograde -2493 Oct 21 j 00:31 24°**Ⅲ**30'11 retrograde -2485 Nov 28 j 03:44 2°**Ω**46′08 opposition -2492 Jan 02 j 07:06 22°**II**27'50 0°26'39 opposition -2484 Feb 09 i 16:47 0°Ω44'09 0°48'27 min. Earth dist. -2492 Jan 03 i 08:41 22° **II**25'02 17.35130 AU min. Earth dist. -2484 Feb 10 i 12:31 0°Ω42'01 17.30333 AU direct -2492 Mar 18 j 06:32 20°**Ⅲ**21'35 -2484 Feb 27 i 01:56 30°R∽ direct -2484 Apr 26 j 13:59 28°937'36 -2492 Jul 08 j 22:47 24°**Д**53'11 0°25'35 -2484 Jun 22 j 17:39 conjunction $0^{\circ}\Omega$ -2492 Jul 08 j 22:47 24°**Д**53'11 0°25'39 max. Earth dist. -2484 Aug 16 j 02:51 3°**Ω**06'26 19.31332 AU minimum elong -2492 Jul 07 j 16:22 24° **II** 48'26 19.33774 AU max. Earth dist. -2492 Oct 25 j 01:09 29°**Ⅲ**16'40 -2484 Aug 17 j 00:36 3°**Ω**09'52 0°44'06 retrograde conjunction 3°**Ω**09'52 -2491 Jan 06 j 06:56 27°**Ⅲ**14'21 0°30'16 -2484 Aug 17 j 00:36 0°44'10 opposition minimum elong -2491 Jan 07 j 08:10 27°**II**11'35 17.32616 AU -2484 Dec 02 j 02:15 7°**Ω**31'59 min. Earth dist. retrograde -2491 Mar 23 j 10:39 25°**Ц**07'55 -2483 Feb 13 j 19:09 5°**Ω**30'09 0°49'49 direct opposition -2483 Feb 14 j 14:14 5°**Ω**28'06 17.32571 AU max. Earth dist. -2491 Jul 12 j 21:58 29°**Ⅲ**35'33 19.31480 AU min. Earth dist. -2483 May 01 j 16:40 3°**Ω**23'49 direct -2491 Jul 14 j 03:09 29°**Ⅱ**40'08 0°28'44 -2483 Aug 21 j 05:34 7°**Ω**52'23 19.33882 AU conjunction max. Earth dist. -2491 Jul 14 j 03:08 29°**Ⅱ**40'08 0°28'47 minimum elong -2491 Jul 19 j 09:35 -2483 Aug 22 j 01:35 7°**Ω**55'33 0°45'11 0ಂತಾ conjunction retrograde -2491 Oct 30 j 01:03 4°903'41 minimum elong -2483 Aug 22 j 01:35 7°**£**55'33 0°45'13 -2490 Jan 11 j 07:21 2°501'23 0°33'41 retrograde -2483 Dec 07 j 03:00 $12^{\circ}\Omega$ 17'14 opposition min. Earth dist. -2490 Jan 12 j 08:54 1°958'36 17.30554 AU opposition -2482 Feb 18 j 21:27 $10^{\circ}\Omega$ 15'35 0° 50'50 -2490 Mar 14 j 13:24 30°R II min. Earth dist. -2482 Feb 19 j 14:04 10° **Ω**13'48 17.35393 AU -2490 Mar 28 j 13:38 29°**Д**54'50 -2482 May 06 j 22:35 8°**Ω**09'31 direct direct -2490 Apr 11 j 11:35 0ಂಣ max. Earth dist. -2482 Aug 26 j 08:11 12° Ω37'44 19.36975 AU max. Earth dist. -2490 Jul 18 j 01:18 4°522'45 19.29670 AU -2482 Aug 27 j 02:03 12° **Ω**40'34 0°45'56 conjunction -2490 Jul 19 i 07:20 -2482 Aug 27 j 02:03 $12^{\circ}\Omega 40'34 \quad 0^{\circ}46'00$ conjunction 4°527'29 0°31'41 minimum elong -2490 Jul 19 i 07:20 -2482 Oct 04 i 16:23 15°Ω minimum elong 4°9527'29 0°31'44 -2490 Nov 04 i 01:21 retrograde 8°951'02 retrograde -2482 Dec 12 j 00:32 17° Ω 01'45 opposition -2489 Jan 16 j 08:01 6°548'45 0°36'51 opposition -2481 Feb 23 j 23:55 $15^{\circ}\Omega00'17$ $0^{\circ}51'30$ min. Earth dist. -2489 Jan 17 i 09:13 6°546'00 17.29008 AU -2481 Feb 24 j 02:30 15°RΩ direct -2489 Apr 02 j 17:32 4°9542'04 min. Earth dist. -2481 Feb 24 j 16:00 14° Ω58'33 17.38744 AU max. Earth dist. -2489 Jul 23 j 07:07 9°510'34 19.28389 AU direct -2481 May 12 j 01:24 $12^{\circ}\Omega$ 54'30 -2481 Jul 22 j 19:18 15°**Ω** conjunction -2489 Jul 24 j 11:25 9°515'02 0°34'24 max. Earth dist. -2481 Aug 31 j 09:15 17°**Ω**22'07 19.40575 AU minimum elong -2489 Jul 24 j 11:25 9°**©**15'02 0°34'28 retrograde -2489 Nov 09 j 02:09 13°538'29 conjunction -2481 Sep 01 j 01:47 17°**Ω**24'44 0°46'23 opposition -2488 Jan 21 j 09:18 11°536'14 0°39'46 minimum elong -2481 Sep 01 j 01:47 17°Ω24'44 0°46'26 -2488 Jan 22 j 09:55 11°533'33 17.28001 AU retrograde -2481 Dec 17 j 00:33 21° Ω 45'22 min. Earth dist. -2480 Feb 29 j 02:17 19° Ω 44'04 0°51'49 direct -2488 Apr 06 j 21:42 9°529'28 opposition -2488 Jul 27 j 10:33 13°558'05 19.27678 AU -2480 Feb 29 j 15:41 19° Ω 42'38 17.42562 AU max. Earth dist. min. Earth dist. direct -2480 May 16 j 06:52 17°Ω38'36 conjunction -2488 Jul 28 j 14:50 14°502'33 0°36'53 max. Earth dist. -2480 Sep 04 j 10:50 22°Ω05'40 19.44601 AU minimum elong -2488 Jul 28 j 14:50 14°502'33 0°36'57 retrograde -2488 Nov 13 j 01:55 18°525'53 conjunction -2480 Sep 05 j 00:45 22°**Ω**07'52 0°46'31 opposition -2487 Jan 25 j 10:51 16°523'38 0°42'24 minimum elong -2480 Sep 05 j 00:45 $22^{\circ}\Omega$ 07'52 0°46'33 min. Earth dist. -2487 Jan 26 j 10:53 16°521'01 17.27606 AU -2480 Dec 20 j 21:34 $26^{\circ}\Omega$ 27'54 retrograde -2487 Apr 12 j 01:01 14°516'49 -2479 Mar 05 j 04:37 24° Ω 26'44 0°51'47 direct opposition

•	omena of Uranus fi		-				age 29
Attention, astronom	ical year style is used: The				2480 BCE in historical of		
min. Earth dist.	-2479 Mar 05 j 17:23	24° Ω 25'23	17.46783 AU	opposition	-2471 Apr 12 j 07:30	1° ≏ 07'50	0°39'58
direct	-2479 May 21 j 09:18	22° Ω 21'35		min. Earth dist.	-2471 Apr 12 j 03:18	1° ≏ 08'16	17.91663 AU
					-2471 May 11 j 06:02		
conjunction	-2479 Sep 09 j 22:56	26° Ω 49'46	0°46'20	direct	-2471 Jun 28 j 15:02	29° Mp 05'22	
minimum elong	-2479 Sep 09 j 22:56	26° Ω 49'46	0°46'22		-2471 Aug 14 j 02:03	0∘ ⊽	
max. Earth dist.	-2479 Sep 09 j 09:58	26° Ω 47'44	19.49013 AU				
	-2479 Nov 05 j 03:24	0° m)		conjunction	-2471 Oct 15 j 23:28	3° £ 21'52	0°34'47
retrograde	-2479 Dec 25 j 20:30	1° m ,09'07		minimum elong	-2471 Oct 15 j 23:28	3° £ 21'52	
	-2478 Feb 17 j 04:19	30°R Ω		max. Earth dist.	-2471 Oct 16 j 04:08		19.95083 AU
opposition	-2478 Mar 10 j 06:25	29° Ω 08'06		retrograde	-2470 Jan 31 j 06:30	7° £ 34'36	
min. Earth dist.	-2478 Mar 10 j 16:33		17.51360 AU	opposition	-2470 Apr 17 j 05:06	5° ≏ 34'18	
direct	-2478 May 26 j 13:05			min. Earth dist.	-2470 Apr 16 j 22:48		17.98540 AU
	-2478 Aug 21 j 11:07	0° m)		direct	-2470 Jul 03 j 11:36	3° ≏ 32'18	
conjunction	-2478 Sep 14 j 20:29	1° m/30'15	0°45'51	conjunction	-2470 Oct 20 j 13:30	7° £ 47'13	0°32'18
minimum elong	-2478 Sep 14 j 20:29	1° mp 30'15		minimum elong	-2470 Oct 20 j 13:30	7° £ 47'13	0°32'18
max. Earth dist.	-2478 Sep 14 j 10:22		19.53749 AU	max. Earth dist.	-2470 Oct 20 j 21:18		20.02059 AU
retrograde	-2478 Dec 30 j 16:57	5° m 48'52	0050140	retrograde	-2469 Feb 04 j 22:52	11° ≙ 59'07	000 410 6
opposition	-2477 Mar 15 j 08:14	3° Mp 47'58	0°50'40	opposition	-2469 Apr 22 j 02:11	9° £ 58'59	
min. Earth dist.	-2477 Mar 15 j 17:27	3° Mp 47'00	17.56244 AU	min. Earth dist.	-2469 Apr 21 j 17:25		18.05581 AU
direct	-2477 May 31 j 14:28	1° Mp 43'26		direct	-2469 Jul 08 j 08:24	7° ≙ 57'28	
conjunction	-2477 Sep 19 j 16:49	6° Mp 09'07	0°45'03	conjunction	-2469 Oct 25 j 02:28	1200 10147	0°29'39
minimum elong		6° Mp 09'07	0°45'05		-2469 Oct 25 j 02:28		0°29'39 0°29'38
max. Earth dist.	-2477 Sep 19 j 16:49		19.58790 AU	minimum elong max. Earth dist.	-2469 Oct 25 j 11:42		
	-2477 Sep 19 j 07:39	-•	19.38/90 AU		,		20.09162 AU
retrograde	-2476 Jan 04 j 15:09	10° Mp 26'58	0940127	retrograde	-2468 Feb 09 j 14:36		0021122
opposition	-2476 Mar 19 j 09:32 -2476 Mar 19 j 16:02	8° Mp 26'09 8° Mp 25'28	0°49'36	opposition	-2468 Apr 25 j 22:40 -2468 Apr 25 j 12:20		
min. Earth dist. direct	-2476 Jun 04 j 16:38	6° Mp 21'54	17.61426 AU	min. Earth dist. direct	-2468 Jul 12 j 02:58		18.12/31 AU
direct	-24/0 Juli 04 j 10.38	0 11/21 34		direct	-2408 Jul 12 J 02.38	12 == 20 33	
conjunction	-2476 Sep 23 j 12:30	10° Mp 46'12	0°43'58	conjunction	-2468 Oct 28 j 14:56	16° ≏ 32'39	0°26'51
minimum elong	-2476 Sep 23 j 12:30	10° mp 46'12		minimum elong	-2468 Oct 28 j 14:56		
max. Earth dist.	-2476 Sep 23 j 06:30		19.64115 AU	max. Earth dist.	-2468 Oct 29 j 02:52		
retrograde	-2475 Jan 08 j 10:28	15° m 03'13		retrograde	-2467 Feb 13 j 06:18		
opposition	-2475 Mar 24 j 10:16	13° m 02'29	0°48'14	opposition	-2467 Apr 30 j 18:10		0°28'10
min. Earth dist.	-2475 Mar 24 j 15:29	-	17.66885 AU	min. Earth dist.	-2467 Apr 30 j 05:32		18.19886 AU
direct	-2475 Jun 09 j 17:08	10° m 58'33		direct	-2467 Jul 16 j 22:15	16° ≏ 42'34	
conjunction	-2475 Sep 28 j 06:58	15° Mp 21'22	0°42'37	conjunction	-2467 Nov 02 j 02:34	20° £ 52'47	0°23'54
minimum elong	-2475 Sep 28 j 06:58	15° Mp 21'22	0°42'38	minimum elong	-2467 Nov 02 j 02:34	20° ≏ 52'47	0°23'53
max. Earth dist.	-2475 Sep 28 j 02:03	15° m 20'36	19.69725 AU	max. Earth dist.	-2467 Nov 02 j 15:40	20° £ 54'46	20.23459 AU
retrograde	-2474 Jan 13 j 07:13	19° m 37'32		retrograde	-2466 Feb 17 j 20:16	25° ≏ 02'19	
opposition	-2474 Mar 29 j 10:27	17° m 36'50	0°46'34	opposition	-2466 May 05 j 13:16		0°24'49
min. Earth dist.	-2474 Mar 29 j 13:03	17° m 36'34	17.72638 AU	min. Earth dist.	-2466 May 04 j 23:38		18.26987 AU
direct	-2474 Jun 14 j 17:57	15° m 33'13		direct	-2466 Jul 21 j 14:42	21° ≏ 02'32	
	0474.0 - 021.02	100** * ***	0041100		046637 05555	250 2 1 111	0020150
conjunction	-2474 Oct 03 j 00:34	19° My 54'30	0°41'00	conjunction	-2466 Nov 06 j 13:31		0°20'50
minimum elong	-2474 Oct 03 j 00:34	19° Mp 54'30	0°41'01	minimum elong max. Earth dist.	-2466 Nov 06 j 13:31		0°20'48
max. Earth dist.	-2474 Oct 02 j 23:04	19° Mp 54'16	19.75621 AU		-2466 Nov 07 j 04:49		20.30496 AU
retrograde	-2473 Jan 18 j 01:13	24° Mp 09'48	0044127	retrograde	-2465 Feb 22 j 11:03		0921120
opposition min. Earth dist.	-2473 Apr 03 j 10:08	22° Mp 09'10 22° Mp 09'06	0°44'37 17.78676 AU	opposition min. Earth dist.	-2465 May 10 j 07:33 -2465 May 09 j 15:36		0°21'20
direct	-2473 Apr 03 j 10:50 -2473 Jun 19 j 17:45		17.78070 AU	direct	-2465 Jul 26 j 08:31		18.33943 AU
direct	-24/3 Juli 17 j 17.43	20 hj/03/33		direct	-2403 Jul 20 J 00.31	23 -20 40	
conjunction	-2473 Oct 07 j 17:05	24° m) 25'36	0°39'09	conjunction	-2465 Nov 10 j 23:47	29° £ 27'57	0°17'40
minimum elong	-2473 Oct 07 j 17:05	24° m) 25'36	0°39'09	minimum elong	-2465 Nov 10 j 23:47	29° £ 27'57	0°17'39
max. Earth dist.	-2473 Oct 07 j 16:57			max. Earth dist.	-2465 Nov 11 j 16:07		20.37356 AU
retrograde	-2472 Jan 22 j 20:17	28° mp 40'02	-		-2465 Nov 19 j 21:14	0° M	
opposition	-2472 Apr 07 j 09:10	26° m/39'29	0°42'24	retrograde	-2464 Feb 26 j 23:30	3°M25'58	
min. Earth dist.	-2472 Apr 07 j 07:17	26° m/39'40		min. Earth dist.	-2464 May 13 j 08:40		18.40710 AU
direct	-2472 Jun 23 j 16:37		-	opposition	-2464 May 14 j 01:09	1°MJ36'33	0°17'46
	,	•			-2464 Jun 29 j 08:25	30° ₹	
conjunction	-2472 Oct 11 j 08:45	28° m 54'42	0°37'04	direct	-2464 Jul 29 j 23:06	29° ≙ 37'13	
minimum elong	-2472 Oct 11 j 08:45	28° m 54'42	0°37'04		-2464 Aug 28 j 19:31	0°M	
max. Earth dist.	-2472 Oct 11 j 12:03	28° m 55'12	19.88324 AU				
	-2472 Oct 29 j 03:36	0∘ ত		conjunction	-2464 Nov 14 j 09:28	3°M42'55	0°14'26
retrograde	-2471 Jan 26 j 13:10	3° ჲ 08'16		minimum elong	-2464 Nov 14 j 09:28	3°M42'55	0°14'24

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2464 in astronomical counting style is the year 2465 BCE in historical counting style. behind sun begin -2464 Nov 14 i 06:18 3°M42'28 -2457 Jan 02 j 12:15 0°**∡**¹ 2°**∡**³39'45 behind sun end -2464 Nov 14 i 12:38 -2457 Mar 28 j 07:25 3°M-43'23 retrograde -2464 Nov 15 j 03:29 3°M45'37 20.44003 AU min. Earth dist. -2457 Jun 13 j 04:08 0° **₹**143'07 18.81230 AU max. Earth dist. -2457 Jun 14 j 05:55 -2463 Mar 02 j 13:09 retrograde 7°M50'12 opposition 0°**х** 40'32 0°-7'-59 0°14'08 -2463 May 18 j 17:49 -2457 Jul 01 j 11:37 opposition 5°**M**50'51 30°RML -2463 May 17 j 23:09 28°M43'12 min. Earth dist. 5°ML52'44 18.47222 AU direct -2457 Aug 29 j 14:12 -2463 Aug 03 j 14:50 -2457 Oct 24 j 11:46 direct 3°M51'52 0°⊀ conjunction -2463 Nov 18 j 18:19 7°M56'07 0°11'08 conjunction -2457 Dec 13 j 11:26 2°**҂**′40′00 0°-8'-52 -2457 Dec 13 j 11:26 2°**х¹**40′00 minimum elong -2463 Nov 18 j 18:19 7° M $_{56}$ '07 0°11'06 minimum elong 0°08'56 -2457 Dec 13 j 05:48 2°**₹**39'12 behind sun begin -2463 Nov 18 j 13:22 7°ML55'24 behind sun begin -2457 Dec 13 j 17:04 behind sun end -2463 Nov 18 j 23:15 7°M56'50 behind sun end 2°**х** 40′48 -2457 Dec 14 j 13:47 max. Earth dist. -2463 Nov 19 j 13:17 7°M58'56 20.50375 AU max. Earth dist. 2°**х** 43′51 20.83660 AU retrograde -2462 Mar 07 j 00:15 12° ML02'40 retrograde -2456 Mar 31 j 15:30 6°**х** 42′59 opposition -2462 May 23 j 09:51 10°M03'22 0°10'26 opposition -2456 Jun 17 j 17:26 4°**∡**°43′50 0°-11'-34 min. Earth dist. -2462 May 22 j 14:54 10°M05'16 18.53471 AU min. Earth dist. -2456 Jun 16 j 15:59 4°**х** 46′22 18.86072 AU direct -2462 Aug 08 j 04:02 8°MJ04'41 direct -2456 Sep 01 j 22:26 2°**х¹**46'46 conjunction -2462 Nov 23 j 02:37 12°ML07'31 conjunction -2456 Dec 16 j 16:55 6°**∡¹**42'38 0°-12'-3 minimum elong -2462 Nov 23 j 02:36 12°ML07'31 minimum elong -2456 Dec 16 j 16:55 6°**х** 42′38 0°12'07 6°**∡**¹42'00 behind sun begin -2462 Nov 22 j 20:41 12°M 06'40 behind sun begin -2456 Dec 16 j 12:25 behind sun end -2462 Nov 23 j 08:30 12°ML08'22 behind sun end -2456 Dec 16 i 21:25 6°**х** 43′16 max. Earth dist. -2462 Nov 23 j 23:06 12°ML10'34 20.56500 AU max. Earth dist. -2456 Dec 17 j 20:01 6° **₹** 46'35 20.88354 AU -2461 Jan 15 j 15:07 15°M retrograde -2455 Apr 05 i 02:36 10°**∡**¹45'13 retrograde -2461 Mar 11 j 12:47 16° ML13'21 min. Earth dist. -2455 Jun 21 j 01:13 8° **₹** 48'49 18.90598 AU -2461 May 08 j 11:47 15°RML -2455 Jun 22 j 04:18 8°**х** 46′07 0°-15'-4 opposition -2461 May 27 j 03:46 14° ML16'12 18.59466 AU -2455 Sep 06 j 08:05 6°**∡**749'19 min. Earth dist. direct opposition -2461 May 28 j 00:59 14°ML14'04 0°06'43 -2461 Aug 12 j 17:50 12°ML15'40 -2455 Dec 20 j 22:02 10° ₹ 44'20 direct conjunction 0°-15'-11 -2461 Nov 05 j 08:49 15°ML -2455 Dec 20 j 22:02 10° ₹ 44'20 0°15'16 minimum elong -2455 Dec 20 j 19:44 10° ₹ 44'01 behind sun begin -2461 Nov 27 j 10:06 16°M 17'07 0°04'29 -2455 Dec 21 j 00:20 10° ₹ 44'39 conjunction behind sun end -2461 Nov 27 j 10:06 16°ML17'07 -2455 Dec 22 j 01:49 10° ₹ 48'22 20.92691 AU 0°04'25 max. Earth dist. minimum elong -2461 Nov 27 j 03:40 16°M16'12 -2454 Apr 09 j 10:22 14° ₹ 46'36 behind sun begin retrograde -2461 Nov 27 j 16:31 16°ML18'03 -2454 Jun 26 j 14:49 12°**x** 47'33 0°-18'-29 behind sun end opposition -2461 Nov 28 j 07:46 16°M20'20 20.62369 AU -2454 Jun 25 j 12:24 12° ₹ 50'11 18.94752 AU max. Earth dist. min. Earth dist. -2460 Mar 14 j 22:56 20° 1.22'18 -2454 Sep 10 j 14:48 10° ₹ 51'00 retrograde direct opposition -2460 May 31 j 15:27 18° M23'00 0°03'00 min. Earth dist. -2460 May 30 j 18:03 18°ML25'09 18.65233 AU conjunction -2454 Dec 25 j 03:11 14° ₹ 45'15 0°-18'-14 direct -2460 Aug 16 j 05:29 16°M24'52 minimum elong -2454 Dec 25 j 03:11 14° ₹ 45'15 0°18'19 max. Earth dist. -2454 Dec 26 j 07:18 14° ₹ 49'19 20.96647 AU -2460 Nov 30 j 17:11 20°M25'02 0°01'06 retrograde -2453 Apr 13 j 20:33 18° **₹** 47'13 conjunction -2460 Nov 30 j 17:11 20°M25'02 -2453 Jun 29 j 21:07 16° ₹750'59 18.98491 AU minimum elong min. Earth dist. -2460 Nov 30 j 10:40 20°M24'06 -2453 Jul 01 j 00:41 16° **₹** 48'14 behind sun begin opposition behind sun end -2460 Nov 30 j 23:42 20°M25'58 direct -2453 Sep 14 j 23:42 14° ₹ 51'54 max. Earth dist. -2460 Dec 01 i 16:14 20° M28'26 20.68026 AU -2459 Mar 19 i 10:40 24° ML29'34 -2453 Dec 29 i 08:12 18° ₹ 45'29 0°-21'-11 retrograde conjunction -2453 Dec 29 i 08:12 18° **1**45'29 0°21'16 desc. node -2459 Mar 27 j 14:19 24° M27'56 minimum elong min. Earth dist. -2459 Jun 04 i 05:11 22°M32'39 18.70782 AU max. Earth dist. -2453 Dec 30 i 12:34 18° ×749'34 21.00140 AU -2459 Jun 05 i 04:47 22°M 30'17 0°00'-41 retrograde -2452 Apr 17 j 04:27 22° ₹ 47'13 opposition direct -2459 Aug 20 j 17:30 20°M32'24 min. Earth dist. -2452 Jul 03 j 07:48 20° ₹ 50'54 19.01742 AU -2452 Jul 04 j 10:14 20° **₹** 48'16 0°-25'-1 opposition -2459 Dec 04 j 23:41 24°M31'22 0°-2'-19 direct -2452 Sep 18 j 05:33 18° ₹ 52'06 conjunction -2459 Dec 04 j 23:41 24°M31'22 minimum elong 0°02'24 behind sun begin -2459 Dec 04 j 17:10 24°M30'26 conjunction -2451 Jan 01 j 13:17 22° ₹ 45'06 0°-24'-2 behind sun end -2459 Dec 05 j 06:13 24°M32'18 minimum elong -2451 Jan 01 j 13:17 22° ₹ 45'06 0°24'07 max. Earth dist. -2459 Dec 05 j 23:52 24°M34'55 20.73460 AU max. Earth dist. -2451 Jan 02 j 17:23 22° ₹ 49'09 21.03131 AU -2458 Mar 23 j 19:41 28° M.35'20 retrograde -2451 Apr 21 j 13:51 26° ₹ 46'38 retrograde -2458 Jun 09 j 17:46 26°M36'04 0°-4'-21 -2451 Jul 08 j 19:04 24°**х** 47'42 0°-28'-5 opposition opposition 18.76121 AU min. Earth dist. -2451 Jul 07 j 15:57 24° ₹ 50'24 19.04459 AU min. Earth dist. -2458 Jun 08 j 18:04 26°M 38'27 direct -2451 Sep 22 j 13:24 22° ₹ 51'39 direct -2458 Aug 25 j 03:33 24°M38'29 conjunction -2458 Dec 09 j 05:42 28°ML36'18 0°-5'-37 conjunction -2450 Jan 05 j 18:17 26° **₹** 44'09 0°-26'-45 minimum elong -2458 Dec 09 j 05:41 28°M36'18 0°05'41 minimum elong -2450 Jan 05 j 18:17 26° **₹** 44'09 0°26'49 behind sun begin -2458 Dec 08 j 23:25 28°M 35'24 max. Earth dist. -2450 Jan 06 j 22:13 26° ₹ 48'10 21.05558 AU behind sun end -2458 Dec 09 j 11:58 28°MJ37'12 -2450 Mar 13 j 00:08 0°る

-2450 Apr 25 j 21:27

retrograde

0°る45'33

max. Earth dist.

-2458 Dec 10 j 07:05 28°ML40'01 20.78689 AU

Attention, astronomical year style is used: The year -2450 in astronomical counting style is the year 2451 BCE in historical counting style.								
, ,	-2450 Jun 10 j 01:28	-		opposition	-2442 Aug 14 j 11:13		0°-47'-55	
min. Earth dist.	-2450 Jul 12 j 01:58	28° х¹ 49′09	19.06607 AU	min. Earth dist.	-2442 Aug 13 j 14:14	0° ≈ 28'49	19.06680 AU	
opposition	-2450 Jul 13 j 03:46	28° х ⁴46'35	0°-31'-1		-2442 Aug 25 j 13:22	30°R₹		
direct	-2450 Sep 26 j 19:00	26° ₹ ¹50'37		direct	-2442 Oct 28 j 11:16	28° ප 30'23		
	-2450 Dec 28 j 12:22	5°0			-2442 Dec 28 j 03:30	0° ≈		
		_						
conjunction	-2449 Jan 09 j 23:11	0°る42'40		conjunction	-2441 Feb 10 j 18:58	2°≈22'22	0°-43'-55	
minimum elong	-2449 Jan 09 j 23:11	0°る42'40		minimum elong	-2441 Feb 10 j 18:58	2°≈22'22	0°43'59	
max. Earth dist.	-2449 Jan 11 j 02:37		21.07432 AU	max. Earth dist.	-2441 Feb 11 j 17:45		21.05802 AU	
retrograde min. Earth dist.	-2449 Apr 30 j 06:27 -2449 Jul 16 j 09:37	4°る43'57	19.08197 AU	retrograde opposition	-2441 Jun 01 j 21:25 -2441 Aug 18 j 17:24	6°≈24'44 4°≈25'03	0°-49'-6	
opposition	-2449 Jul 17 j 11:53	2°る44'55		min. Earth dist.	-2441 Aug 17 j 20:46		19.04891 AU	
direct	-2449 Oct 01 j 01:45	2 04455 0°る48'58	0 -33 -47	direct	-2441 Nov 01 j 16:17	2°≈28'40	17.04071 AC	
					,			
conjunction	-2448 Jan 14 j 04:12	4°₹40'41	0°-31'-46	conjunction	-2440 Feb 15 j 02:05	6° ≈ 21'05	0°-44'-53	
minimum elong	-2448 Jan 14 j 04:12	4° ප 40'41	0°31'50	minimum elong	-2440 Feb 15 j 02:05	6° ≈ 21'05	0°44'57	
max. Earth dist.	-2448 Jan 15 j 07:20	4° ⋜ 44'34	21.08741 AU	max. Earth dist.	-2440 Feb 15 j 23:55	6° ≈ 24'12	21.03790 AU	
retrograde	-2448 May 03 j 13:17	8°₹41'53		retrograde	-2440 Jun 05 j 04:53	10° ≈ 23'52		
opposition	-2448 Jul 20 j 19:29	6° ප 42'45		opposition	-2440 Aug 21 j 23:32	8° ≈ 24'08	0°-50'-2	
min. Earth dist.	-2448 Jul 19 j 18:42		19.09249 AU	min. Earth dist.	-2440 Aug 21 j 04:58		19.02655 AU	
direct	-2448 Oct 04 j 07:06	4° る 46'48		direct	-2440 Nov 04 j 20:02	6° ≈ 27'39		
conjunction	-2447 Jan 17 j 09:10	8° ප 38'15	0°-34'-2	conjunction	-2439 Feb 18 j 09:43	10°220'36	0°-45'-38	
minimum elong	-2447 Jan 17 j 09:10	8° ප 38'15		minimum elong	-2439 Feb 18 j 09:43		0°45'41	
max. Earth dist.	-2447 Jan 18 j 11:44		21.09555 AU	max. Earth dist.	-2439 Feb 19 i 05:48			
retrograde	-2447 May 07 j 21:59	12° る 39'26		retrograde	-2439 Jun 09 j 15:09	14° ≈ 23'50		
min. Earth dist.	-2447 Jul 24 j 01:29	10°る42'43	19.09827 AU	opposition	-2439 Aug 26 j 05:50	12° ≈ 24′02	0°-50'-45	
opposition	-2447 Jul 25 j 02:41	10° ප් 40'12	0°-38'-48	min. Earth dist.	-2439 Aug 25 j 12:02		18.99954 AU	
direct	-2447 Oct 08 j 12:52	8° ප 44'12		direct	-2439 Nov 09 j 01:18	10° ≈ 27'24		
	04467 01:14.05	100705100	00.24.0		2420 7 1 22 1 4 5 1	1.40 20150	00.461.0	
conjunction	-2446 Jan 21 j 14:05			conjunction	-2438 Feb 22 j 17:51		0°-46'-9	
minimum elong max. Earth dist.	-2446 Jan 21 j 14:05 -2446 Jan 22 j 16:28			minimum elong max. Earth dist.	-2438 Feb 22 j 17:51 -2438 Feb 23 j 12:39	14°≈20'58	0°46'12	
retrograde	-2446 May 12 j 04:22		21.09900 AU	max. Earth dist.	-2438 Mar 06 j 04:36		20.98373 AU	
min. Earth dist.	-2446 Jul 28 j 09:51		19 09966 AU	retrograde	-2438 Jun 13 j 23:44			
opposition	-2446 Jul 29 j 09:43			opposition	-2438 Aug 30 j 12:23		0°-51'-13	
direct	-2446 Oct 12 j 17:35			min. Earth dist.	-2438 Aug 29 j 20:49			
	·				-2438 Oct 08 j 05:05			
conjunction	-2445 Jan 25 j 19:18	16° ප 32'31	0°-38'-4	direct	-2438 Nov 13 j 05:35	14° ≈ 27'59		
minimum elong	-2445 Jan 25 j 19:18				-2438 Dec 18 j 12:59	15° ≈		
max. Earth dist.	-2445 Jan 26 j 21:04		21.09848 AU					
retrograde	-2445 May 16 j 13:25		00.421.4	conjunction	-2437 Feb 27 j 02:48		0°-46'-27	
opposition	-2445 Aug 02 j 16:15			minimum elong	-2437 Feb 27 j 02:48		0°46'31	
min. Earth dist. direct	-2445 Aug 01 j 16:08 -2445 Oct 16 j 22:52		19.09/19 AU	max. Earth dist. retrograde	-2437 Feb 27 j 19:20 -2437 Jun 18 j 10:37		20.94904 AU	
direct	-2443 Oct 10 j 22.32	10 036 16		opposition	-2437 Sep 03 j 18:53		0°-51'-26	
conjunction	-2444 Jan 30 j 00:45	20° Z 29'33	0°-39'-49	min. Earth dist.	-2437 Sep 03 j 18:33			
minimum elong	-2444 Jan 30 j 00:45			direct	-2437 Nov 17 j 11:39		2., 2,, 1110	
max. Earth dist.	-2444 Jan 31 j 02:10	20° පි 33'10	21.09399 AU		•			
retrograde	-2444 May 19 j 19:33	24° る 31'03		conjunction	-2436 Mar 02 j 12:24	22° ≈ 24'25	0°-46'-32	
opposition	-2444 Aug 05 j 22:44			minimum elong	-2436 Mar 02 j 12:24	22° ≈ 24'25	0°46'34	
min. Earth dist.	-2444 Aug 05 j 00:06		19.09081 AU	max. Earth dist.	-2436 Mar 03 j 03:21		20.90900 AU	
direct	-2444 Oct 20 j 02:41	20° ප 35'22		retrograde	-2436 Jun 21 j 19:44			
aonius -ti	0442 E-F 00:00:00	240=22045	00 411 22	opposition	-2436 Sep 07 j 01:41		0°-51'-23	
conjunction	-2443 Feb 02 j 06:26			min. Earth dist.	-2436 Sep 06 j 13:35		18.88/34 AU	
minimum elong max. Earth dist.	-2443 Feb 02 j 06:26 -2443 Feb 03 j 06:58			direct	-2436 Nov 20 j 16:34	∠∠ ≈ 3141		
retrograde	-2443 May 24 j 05:02		21.00301 AU	conjunction	-2435 Mar 06 j 22:23	26°≈27'30	0°-46'-22	
min. Earth dist.	-2443 Aug 09 j 06:16		19.08074 AU	minimum elong	-2435 Mar 06 j 22:23		0°46'25	
opposition	-2443 Aug 10 j 04:56			max. Earth dist.	-2435 Mar 07 j 10:58			
direct	-2443 Oct 24 j 07:46				-2435 May 20 j 10:25	0° \		
	·			retrograde	-2435 Jun 26 j 07:08	0°) 32′52		
conjunction	-2442 Feb 06 j 12:30	28° පි 24'18	0°-42'-45		-2435 Aug 02 j 14:51	30° ₹ ≈		
minimum elong	-2442 Feb 06 j 12:30	28° ₹ 24'18	0°42'50	opposition	-2435 Sep 11 j 08:33		0°-51'-5	
max. Earth dist.	-2442 Feb 07 j 12:29		21.07379 AU	min. Earth dist.	-2435 Sep 10 j 21:38		18.84029 AU	
, 1	-2442 Mar 07 j 07:03	0°≈ 2°26/20		direct	-2435 Nov 24 j 23:26			
retrograde	-2442 May 28 j 11:28	2°≈26′20			-2434 Mar 02 j 04:27	0° ∺		

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, Attention, astronomical year style is used: The year -2434 in astronomical counting style is the year 2435 BCE in historical counting style. 0°**)** 31'34 0°-45'-58 3°Υ53'51 0°-34'-29 -2434 Mar 11 j 09:09 conjunction -2426 Apr 15 j 02:40 conjunction minimum elong minimum elong -2434 Mar 11 i 09:09 0°**¥**31'34 0°46'01 -2426 Apr 15 j 02:40 3°**Υ**53'51 0°34'30 max. Earth dist. -2434 Mar 11 j 20:23 0°**)** 33'10 20.81511 AU max. Earth dist. -2426 Apr 14 j 22:38 3°Υ53'15 20.33876 AU 4°**)**€37'32 -2434 Jun 30 j 16:57 -2426 Aug 04 j 04:08 8°Y06'09 retrograde retrograde -2426 Oct 18 j 14:11 6°Υ04'38 0°-36'-55 -2434 Sep 15 j 15:39 2°**)** 36'59 opposition 0°-50'-32 opposition -2434 Sep 15 j 06:54 2°**升**37'54 18.78934 AU -2426 Oct 18 j 18:47 6°**Υ**04'09 18.30578 AU min. Earth dist. min. Earth dist. -2434 Nov 29 j 05:10 -2425 Jan 01 j 02:02 4°Υ03'58 direct 0°**)**38'59 direct -2433 Mar 15 j 20:31 4°\;\;436'41 0°-45'-20 -2425 Apr 19 j 21:00 8°Y12'23 0°-32'-3 conjunction conjunction -2425 Apr 19 j 21:00 minimum elong -2433 Mar 15 j 20:31 4°\;\;436'41 0°45'23 minimum elong 8°Υ12'23 0°32'04 -2433 Mar 16 j 05:20 -2425 Apr 19 j 13:28 max. Earth dist. 4°**₭**37'57 20.76263 AU max. Earth dist. 8°**Y**11'17 20.27267 AU -2433 Jul 05 j 04:56 8°**)**43′18 -2425 Aug 08 j 20:15 12°**Y**25'35 retrograde retrograde -2433 Sep 19 j 22:56 6°**)** 42'34 0°-49'-42 -2425 Oct 23 j 01:41 10°**Y**23′59 opposition opposition 0°-34'-7 min. Earth dist. -2433 Sep 19 j 15:28 6°**)**43'21 18.73529 AU min. Earth dist. -2425 Oct 23 j 08:24 10° Υ 23'16 18.23893 AU direct -2433 Dec 03 j 12:33 4°**)**(44'12 direct -2424 Jan 05 j 14:37 8°Y22'57 conjunction -2432 Mar 19 j 08:41 8°**)** 42′59 0°-44'-28 conjunction -2424 Apr 23 j 16:22 12°**Y**32'57 0°-29'-25 minimum elong -2432 Mar 19 j 08:41 8°**)** 42′59 0°44'30 minimum elong -2424 Apr 23 j 16:23 12°**Y**32'57 0°29'25 max. Earth dist. -2432 Mar 19 j 16:16 8°**)** 44′04 20.70711 AU max. Earth dist. -2424 Apr 23 j 07:32 12°**Y**31'39 20.20493 AU retrograde -2432 Jul 08 j 15:54 12°\ 50'17 retrograde -2424 Aug 12 j 12:35 16°**Y**47'01 opposition -2432 Sep 23 j 06:30 10°) (49'23 0°-48'-38 opposition $-2424 \text{ Oct } 26 \text{ j } 13:49 \quad 14^{\circ} \Upsilon 45'19$ 0°-31'-6 min. Earth dist. -2432 Sep 23 j 01:02 10° ★ 49'57 18.67853 AU min. Earth dist. -2424 Oct 26 j 22:18 14° γ 44'24 18.17041 AU direct -2432 Dec 06 j 19:21 8°**)** 50'40 direct -2423 Jan 09 j 03:24 12°**Y**43'55 conjunction -2431 Mar 23 j 21:28 12° ¥ 50'36 0°-43'-22 conjunction -2423 Apr 28 i 12:28 16°**Υ**'55'28 0°-26'-36 minimum elong -2431 Mar 23 j 21:28 12° ¥ 50'36 0°43'24 minimum elong -2423 Apr 28 i 12:28 16° Υ 55'28 0°26'36 max. Earth dist. -2431 Mar 24 j 02:33 12° X 51'20 20.64942 AU max. Earth dist. -2423 Apr 28 j 00:03 16°Υ53'38 20.13585 AU retrograde -2431 Jul 13 j 04:37 16° ¥ 58'39 retrograde -2423 Aug 17 j 05:30 21°**Υ** 10'24 opposition -2431 Sep 27 j 14:30 14° **★** 57'35 0°-47'-18 opposition -2423 Oct 31 j 02:40 19° Υ 08'34 0°-27'-52 -2431 Sep 27 j 10:16 14° \(\) 58'01 18.61990 AU -2423 Oct 31 j 13:23 19°Υ07'25 18.10086 AU min. Earth dist. min. Earth dist. -2431 Dec 11 j 03:03 12° **€** 58'31 -2422 Jan 13 j 18:09 17°**Υ**06'44 direct direct -2422 May 03 j 09:33 21°**Υ**19'53 0°-23'-36 -2430 Mar 28 j 11:03 16° ¥ 59'41 0°-42'-3 conjunction conjunction -2430 Mar 28 j 11:03 16° **米** 59'41 0°42'04 -2422 May 03 j 09:33 21°**Y**19'53 0°23'35 minimum elong minimum elong -2430 Mar 28 j 15:04 17° **米** 00'16 20.58987 AU -2422 May 02 j 20:01 21°Υ17'53 20.06588 AU max. Earth dist. max. Earth dist. -2430 Jul 17 j 17:16 21°**米**08'31 -2422 Aug 21 j 22:49 25°**Y**35'37 retrograde retrograde -2430 Oct 01 j 22:59 19° ¥07'19 0°-45'-43 -2422 Nov 04 j 16:11 23°**Υ**'33'40 0°-24'-27 opposition opposition min. Earth dist. -2430 Oct 01 j 20:37 19° **米**07'34 18.55953 AU min. Earth dist. -2422 Nov 05 j 04:20 23°**Υ**'32'21 18.03059 AU direct -2430 Dec 15 j 11:08 17°**₭**07'56 direct -2421 Jan 18 j 09:25 21°**Y**31'23 -2429 Apr 02 j 01:34 21° **)** 10'25 0°-40'-29 -2421 May 08 j 07:22 25°**Y**46'07 0°-20'-26 conjunction conjunction minimum elong -2429 Apr 02 j 01:34 21° **H** 10'25 0°40'30 minimum elong -2421 May 08 j 07:22 25°**Y**46'07 0°20'25 max. Earth dist. max. Earth dist. -2421 May 07 j 14:29 25°**Y**43'36 19.99562 AU retrograde -2429 Jul 22 j 07:06 25°**₭**20'04 -2421 Aug 16 j 18:44 0° 8 -2429 Oct 06 j 07:50 23° ¥ 18'46 0°-43'-53 retrograde -2421 Aug 26 j 16:22 0°802'39 opposition -2429 Oct 06 j 06:56 23° \(\) 18'52 18.49797 AU min. Earth dist. -2429 Dec 19 j 19:39 21°**升** 19'02 -2421 Nov 09 i 06:21 28°**Υ**'00'32 0°-20'-51 direct opposition -2421 Nov 09 j 20:46 27° γ′ 58' 59 17.960 58 AU min. Earth dist. -2428 Apr 05 i 17:05 25° \(22'56 \) 0°-38'-43 -2420 Jan 23 j 01:46 25° Υ 57'48 conjunction direct minimum elong -2428 Apr 05 i 17:05 25°\colon 22'56 0°38'44 -2420 May 08 j 07:56 0°8 max. Earth dist. -2428 Apr 05 j 17:13 25° + 22'57 20.46673 AU conjunction retrograde -2428 Jul 25 j 21:28 29° **)** 33'26 -2420 May 12 j 06:04 0°814'07 0°-17'-7 opposition -2428 Oct 09 j 17:22 27° ¥ 32'04 0°-41'-48 minimum elong -2420 May 12 j 06:04 0°814'07 0°17'07 -2420 May 11 j 12:22 min. Earth dist. -2428 Oct 09 j 18:17 27°**)** 31'58 18.43511 AU max. Earth dist. 0°811'29 19.92594 AU direct -2428 Dec 23 j 05:03 25° **∺** 32'03 retrograde -2420 Aug 30 j 11:19 4°**8**31'25 opposition -2420 Nov 12 j 21:15 2°**8**29'10 0°-17'-7 conjunction -2427 Apr 10 j 09:13 29° ★37'22 0°-36'-43 min. Earth dist. -2420 Nov 13 j 12:36 2°827'30 17.89144 AU minimum elong -2427 Apr 10 j 09:13 29° **★** 37'22 0°36'44 direct -2419 Jan 26 j 19:08 0°826'00 max. Earth dist. -2427 Apr 10 j 06:22 29°**)** 36'57 20.40341 AU max. Earth dist. -2419 May 16 j 08:42 4°**8**40'47 19.85757 AU $0^{\circ}\Upsilon$ -2427 Apr 16 j 20:11 -2427 Jul 30 j 12:26 3°**Y**48'47 conjunction -2419 May 17 j 05:09 4°**8**43'51 0°-13'-42 retrograde 4°**8**43'51 opposition -2427 Oct 14 j 03:30 1°**Y**'47'20 0°-39'-29 minimum elong -2419 May 17 j 05:08 0°13'40 4°843'20 min. Earth dist. -2427 Oct 14 j 06:09 1°**Y**47'03 18.37118 AU behind sun begin -2419 May 17 j 01:40 -2427 Dec 05 j 08:30 30°R₩ behind sun end -2419 May 17 j 08:37 4°**8**44'21 direct -2427 Dec 27 j 15:14 29° **★**46'59 retrograde -2419 Sep 04 j 05:49 9°**8**01'55 -2426 Jan 18 j 20:19 $0^{\circ}\Upsilon$ opposition -2419 Nov 17 j 12:58 6°859'31 0°-13'-15

min. Earth dist.

-2419 Nov 18 j 06:25

6°**と**57'38 17.82415 AU

Planetary Phenomena of Uranus from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:41, page 33 Attention, astronomical year style is used: The year -2418 in astronomical counting style is the year 2419 BCE in historical counting style.

Attention, astronomical year style is used: The year -2418 in astronomical counting style is the year 2419 BCE in historical counting style.								
direct	-2418 Jan 31 j 12:33	4° 8 55'53		direct	-2412 Feb	28 j 15:11	2° Ⅱ 32'35	
max. Earth dist.	-2418 May 21 j 08:13	9° 8 12'08	19.79137 AU					
				conjunction	-2412 Jun		7° Ⅱ 00'31	
conjunction	-2418 May 22 j 05:14	9° 8 15'18		minimum elong	-2412 Jun		7° Ⅱ 00'31	0°12'09
minimum elong	-2418 May 22 j 05:14	9° 8 15'18	0°10'09	behind sun begin	-2412 Jun		6° Ⅱ 59'51	
behind sun begin	-2418 May 21 j 23:52	9° 8 14'30		behind sun end	-2412 Jun		7° Ⅱ 01'12	
behind sun end	-2418 May 22 j 10:36	9° 8 16'05		max. Earth dist.	-2412 Jun	-		19.46744 AU
retrograde	-2418 Sep 09 j 02:41	13° 8 34'04		retrograde	-2412 Oct	-	11° Ⅲ 23'00	
opposition	-2418 Nov 22 j 05:11	11° 8 31'34		opposition	-2412 Dec	-	9° ∏ 20′32	
min. Earth dist.	-2418 Nov 22 j 23:09		17.75924 AU	min. Earth dist.	-2412 Dec			17.44699 AU
direct	-2417 Feb 05 j 07:47	9° 8 27'32	10.50500 111	direct	-2411 Mar	04 J 15:22	7° Ⅱ 14'50	
max. Earth dist.	-2417 May 26 j 06:38	13°044'56	19.72790 AU		2411 1	24:22.22	110π 42155	0915142
	2417 M 27 : 05.56	120 40120	09 (1.24	conjunction		-	11° II 43'55	
conjunction minimum elong	-2417 May 27 j 05:56 -2417 May 27 j 05:56			minimum elong behind sun begin			11° Ⅱ 43'55 11° Ⅱ 43'54	0-154/
behind sun begin	-2417 May 27 j 03:30 -2417 May 26 j 23:34		0 00 33	behind sun end			11° II 43'56	
behind sun end	-2417 May 20 j 23:34 -2417 May 27 j 12:17			max. Earth dist.				19.42686 AU
bennia sun ena	-2417 Jun 16 j 02:08			retrograde		-	16° Д 06'50	17.42000 AC
retrograde	-2417 Sep 13 j 22:13			opposition			14° Ⅱ 04'24	0°19'28
opposition	-2417 Nov 26 j 22:28		0°-5'-13	min. Earth dist.				17.40833 AU
min. Earth dist.	-2417 Nov 27 j 18:22			direct			11° I I58'30	17.10033110
	-2417 Dec 23 j 06:12		.,,,,,,	max. Earth dist.				19.39008 AU
direct	-2416 Feb 10 j 02:16					,		-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	-2416 Mar 29 j 01:18			conjunction	-2410 Jun	30 i 02:42	16° Ⅱ 28'38	0°19'16
max. Earth dist.	-2416 May 30 j 07:24		19.66793 AU	minimum elong		-	16° Ⅱ 28'38	0°19'20
	J			retrograde		-	20° Ⅲ 51'54	
conjunction	-2416 May 31 j 07:11	18° 8 23'21	0°-2'-54	opposition			18° Ⅱ 49'30	0°23'22
minimum elong	-2416 May 31 j 07:10	18° 8 23'21	0°02'53	min. Earth dist.	-2410 Dec	29 j 21:37	18° Ⅱ 46'48	17.37349 AU
behind sun begin	-2416 May 31 j 00:24	18° 8 22'21		direct	-2409 Mar	14 j 17:12	16° ∐ 43'24	
behind sun end	-2416 May 31 j 13:56	18° 8 24'21		max. Earth dist.	-2409 Jul	04 j 02:00	21° Ⅱ 09'52	19.35714 AU
retrograde	-2416 Sep 17 j 20:42	22° 8 43'30						
opposition	-2416 Nov 30 j 16:21	20° 8 40'53	0°-1'-6	conjunction	-2409 Jul	05 j 07:20	21° Ⅱ 14'27	0°22'42
min. Earth dist.	-2416 Dec 01 j 12:17	20° 8 38'42	17.63946 AU	minimum elong	-2409 Jul	05 j 07:20	21° Ⅱ 14'27	0°22'46
direct	-2415 Feb 13 j 23:10	18° 8 36'08		retrograde	-2409 Oct	21 j 14:36	25° Ⅱ 37'57	
asc. node	-2415 Mar 10 j 17:07			opposition			23° ∏ 35'36	
max. Earth dist.	-2415 Jun 04 j 07:43	22° 8 56'08	19.61178 AU	min. Earth dist.				17.34268 AU
				direct			21° Ⅱ 29'20	
conjunction	-2415 Jun 05 j 09:05			max. Earth dist.	-2408 Jul	08 j 05:11	25° ∏ 56′20	19.32858 AU
minimum elong	-2415 Jun 05 j 09:04		0°00'56				_	
behind sun begin	-2415 Jun 05 j 02:17			conjunction		5	26° Ⅱ 01'07	
behind sun end	-2415 Jun 05 j 15:51			minimum elong	-2408 Jul	-		0°26'02
retrograde	-2415 Sep 22 j 17:27		0000100		-2408 Sep	5	0.22 mg	
opposition	-2415 Dec 05 j 11:06		0°03'02	retrograde	-2408 Oct	-	0°524'49	
min. Earth dist.	-2415 Dec 06 j 08:54		17.58544 AU		-2408 Nov			0920142
direct	-2414 Feb 18 j 19:02		10 55001 ATT	opposition	-2407 Jan	-		
max. Earth dist.	-2414 Jun 09 j 09:34	2/ 034 20	19.55981 AU	min. Earth dist. direct	-2407 Jan -2407 Mar			17.31650 AU
conjunction	-2414 Jun 10 j 11:39	27° × 38'26	0°04'41	direct	-2407 Jul	-	0°9	
minimum elong	-2414 Jun 10 j 11:39			max. Earth dist.	-2407 Jul -2407 Jul	-		19.30477 AU
behind sun begin	-2414 Jun 10 j 05:02		0 04 44	max. Earth dist.	-2407 Jul	13 J 11.01	0 34330	19.30477 AU
behind sun end	-2414 Jun 10 j 18:17	27° 8 39'26		conjunction	-2407 Jul	14 i 16·15	0°548'25	0°29'06
bennia sun ena	-2414 Jul 20 j 19:51	0°Ⅱ		minimum elong	-2407 Jul	-	0°948'25	0°29'09
retrograde	-2414 Sep 27 j 17:10	1° ∏ 59'51		retrograde	-2407 Oct	5	5°912'11	0 29 09
1011081440	-2414 Dec 09 j 05:37	30°R8		opposition	-2406 Jan	-	3°909'51	0°34'04
opposition	-2414 Dec 10 j 06:35	29° 8 57'16	0°07'12	min. Earth dist.	-2406 Jan	5		17.29523 AU
min. Earth dist.	-2414 Dec 11 j 04:19		17.53541 AU	direct	-2406 Mar	5	1°503'16	-,,-,,-,
direct	-2413 Feb 23 j 17:29	27° 8 51'59				J - 1.2		
	-2413 May 07 j 07:20	0°Щ		conjunction	-2406 Jul	19 j 20:32	5° © 36'07	0°32'00
max. Earth dist.	-2413 Jun 14 j 11:45		19.51165 AU	minimum elong	-2406 Jul	-	5° © 36'07	0°32'04
	•			max. Earth dist.	-2406 Jul	18 j 14:32	5° 5 31'24	19.28624 AU
conjunction	-2413 Jun 15 j 14:49	2° Ⅱ 18'39	0°08'24	retrograde	-2406 Nov	-	9° © 59'54	
minimum elong	-2413 Jun 15 j 14:49	2° Ⅱ 18′39	0°08'27	opposition	-2405 Jan	16 j 21:29	7° 9 57'34	0°37'12
behind sun begin	-2413 Jun 15 j 08:54	2° Ⅱ 17'45		min. Earth dist.	-2405 Jan	17 j 22:31	7° 9 54'50	17.27958 AU
behind sun end	-2413 Jun 15 j 20:44	2° Ⅱ 19'32		direct	-2405 Apr		5° © 50'51	
retrograde	-2413 Oct 02 j 15:16	6° Ⅱ 40'37		max. Earth dist.	-2405 Jul	23 j 20:32	10° © 19'35	19.27346 AU
opposition	-2413 Dec 15 j 03:03	4° ∏ 38′06	0°11'21					
min. Earth dist.	-2413 Dec 16 j 02:39	4° ∏ 35'31	17.48929 AU	conjunction	-2405 Jul	25 j 00:36	10° 5 24'00	0°34'41

Attention, astronomical year style is used: The year -2405 in astronomical counting style is the year 2406 BCE in historical counting style.

Attention, astronomi	cal year style is used:	The year -2405	in astronomical
minimum elong	-2405 Jul 25 j 00:3	6 10°524'00	0°34'45
retrograde	-2405 Nov 09 j 15:1	7 14° © 47'42	
opposition	-2404 Jan 21 j 22:4	9 12° © 45'24	0°40'03
min. Earth dist.	-2404 Jan 22 j 23:1	9 12° © 42'44	17.26984 AU
direct	-2404 Apr 07 j 10:5	0 10° © 38'36	
max. Earth dist.	-2404 Jul 28 j 00:0	9 15° 5 07'28	19.26697 AU
conjunction	-2404 Jul 29 j 04:1		0°37'07
minimum elong	-2404 Jul 29 j 04:1		0°37'12
retrograde	-2404 Nov 13 j 16:0		
opposition	-2403 Jan 26 j 00:2		0°42'39
min. Earth dist.	-2403 Jan 27 j 00:0		17.26678 AU
direct	-2403 Apr 12 j 14:3	7 15° © 26'21	
max. Earth dist.	-2403 Aug 02 j 05:4	0 19° © 55'34	19.26727 AU
conjunction	-2403 Aug 03 j 07:3		0°39'18
minimum elong	-2403 Aug 03 j 07:3		0°39'21
retrograde	-2403 Nov 18 j 16:4		
opposition	-2402 Jan 31 j 02:1		0°44'56
min. Earth dist.	-2402 Feb 01 j 00:3		17.27039 AU
direct	-2402 Apr 17 j 18:3	3 20°5514'00	
max. Earth dist.	-2402 Aug 07 j 09:1	1 24°543'11	19.27434 AU
agniumation	-2402 Aug 08 j 10:2	3 24° © 47'11	0°41'13
conjunction minimum elong	-2402 Aug 08 j 10:2		0°41'16
_	• •		0 41 10
retrograde	-2402 Nov 23 j 17:1		0046154
opposition	-2401 Feb 05 j 04:2		0°46'54
min. Earth dist.	-2401 Feb 06 j 01:5		17.28095 AU
direct	-2401 Apr 22 j 22:0	8 25° © 01'28	
conjunction	-2401 Aug 13 j 12:4	7 29° © 34'21	0°42'50
minimum elong	-2401 Aug 13 j 12:4		0°42'53
max. Earth dist.	-2401 Aug 12 j 13:4		19.28832 AU
	-2401 Aug 20 j 06:4		
retrograde	-2401 Nov 28 j 17:5		
opposition	-2400 Feb 10 j 06:4		0°48'33
min. Earth dist.	-2400 Feb 11 j 02:1		17.29806 AU
iiiii. Eartii dist.	-2400 Pcb 11 j 02:1		17.29800 AU
J: 4	-2400 Apr 06 j 04.2 -2400 Apr 27 j 03:0		
direct	-2400 Apr 27 j 03:0 -2400 May 17 j 21:2		
	-2400 May 17 J 21.2	0 0 06	
conjunction	-2400 Aug 17 j 14:3	0 4° Ω 21'06	0°44'10
minimum elong	-2400 Aug 17 j 14:3		0°44'12
max. Earth dist.	-2400 Aug 16 j 16:5		19.30860 AU
retrograde	-2400 Dec 02 j 17:1		
2			

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2400 in astronomical counting style is the year 2401 BCE in historical counting style. -2400 Feb 10 i 06:48 1°Ω55'08 0°48'33 min. Earth dist. -2393 Mar 16 j 08:30 4° m 59'24 17.55668 AU opposition min. Earth dist. -2400 Feb 11 j 02:13 1°**Ω**53'01 17.29806 AU -2393 Jun 01 j 05:49 direct 2° m 55'46 -2400 Apr 06 j 04:28 30°RS -2393 Sep 20 j 07:53 direct -2400 Apr 27 j 03:01 29°548'38 7°**™**21'28 0°44'43 conjunction -2400 May 17 j 21:20 -2393 Sep 20 j 07:53 7° m 21'28 0°44'44 0 $^{\circ}\Omega$ minimum elong -2393 Sep 19 j 22:38 max. Earth dist. 7° Mp 20'01 19.58207 AU -2392 Jan 05 j 05:34 4°Ω21'06 0°44'10 conjunction -2400 Aug 17 j 14:30 retrograde 11°Mp39'19 -2400 Aug 17 j 14:30 minimum elong 4°Ω21'06 0°44'12 opposition -2392 Mar 20 j 00:19 9° m 38'24 0°49'12 -2400 Aug 16 j 16:54 max. Earth dist. 4°**Ω**17'41 19.30860 AU min. Earth dist. -2392 Mar 20 j 06:51 9° Mp 37'42 17.60843 AU retrograde -2400 Dec 02 j 17:10 8°**Ω**43'25 direct -2392 Jun 05 j 07:59 7° m 34'03 opposition -2399 Feb 14 j 09:22 6°**Ω**41'38 0°49'51 -2392 Sep 24 j 03:24 11° m 58'21 min. Earth dist. -2399 Feb 15 j 04:11 6°**Ω**39'36 17.32135 AU conjunction 0°43'35 -2392 Sep 24 j 03:24 11° m 58'21 direct -2399 May 02 j 06:41 4°**Ω**35'21 minimum elong 0°43'37 max. Earth dist. -2392 Sep 23 j 21:27 11° m 57'26 19.63545 AU conjunction -2399 Aug 22 j 15:46 9°**Ω**07'15 0°45'11 retrograde -2391 Jan 09 j 01:00 16° Mp 15'22 minimum elong -2399 Aug 22 j 15:46 9°**Ω**07'15 0°45'14 opposition -2391 Mar 25 j 01:06 14° m 14'31 0°47'47 max. Earth dist. -2399 Aug 21 j 19:56 9°**Ω**04'07 19.33475 AU min. Earth dist. -2391 Mar 25 j 06:19 14° Mp 13'58 17.66339 AU retrograde -2399 Dec 07 j 17:26 13° **Ω**29'06 direct -2391 Jun 10 j 08:41 12° m 10'30 opposition -2398 Feb 19 j 11:45 11° **Ω**27'29 0°50'49 min. Earth dist. -2398 Feb 20 j 04:20 11° Ω 25'42 17.35001 AU conjunction -2391 Sep 28 j 21:47 16° mp 33'19 direct -2398 May 07 j 12:09 9°**£**21′27 minimum elong -2391 Sep 28 j 21:47 16° mp 33'19 0°42'11 max. Earth dist. -2391 Sep 28 i 17:04 16° m 32'34 19.69218 AU conjunction -2398 Aug 27 j 16:29 $13^{\circ}\Omega 52'39$ $0^{\circ}45'53$ retrograde -2390 Jan 13 j 21:01 20° m 49'28 minimum elong -2398 Aug 27 i 16:29 $13^{\circ}\Omega$ 52'39 0°45'55 opposition -2390 Mar 30 j 01:07 18° mp 48'42 0°46'04 max. Earth dist. -2398 Aug 26 j 22:31 13° **Ω** 49'49 19.36591 AU min. Earth dist. -2390 Mar 30 j 03:29 18° mp 48'27 17.72184 AU -2398 Sep 14 j 14:15 15°Ω -2390 Jun 15 j 08:30 16° m 45'01 direct -2398 Dec 12 j 15:45 $18^{\circ}\Omega$ 13'59 retrograde -2397 Feb 24 j 14:30 $16^{\circ}\Omega$ 12'31 $0^{\circ}51'25$ -2390 Oct 03 j 15:24 21° Mp 06'19 0°40'32 conjunction opposition -2397 Feb 25 j 06:34 $16^{\circ}\Omega$ 10'48 17.38357 AU -2390 Oct 03 j 15:24 21° Mp 06'19 0°40'32 min. Earth dist. minimum elong -2397 Mar 26 j 16:47 15°RΩ -2390 Oct 03 j 14:13 21° m 06'08 19.75237 AU max. Earth dist. -2397 May 12 j 15:42 $14^{\circ}\Omega$ 06'45 -2389 Jan 18 j 15:50 25° m 21'36 direct retrograde -2397 Jun 27 j 05:37 15° Ω -2389 Apr 04 j 00:48 23° Mp 20'56 0°44'04 opposition -2389 Apr 04 j 01:15 23° m 20'53 17.78370 AU min. Earth dist. -2397 Sep 01 j 16:19 $18^{\circ}\Omega$ 37'05 $0^{\circ}46'17$ -2389 Jun 20 j 08:26 21° m 17'38 conjunction direct -2397 Sep 01 j 16:19 $18^{\circ}\Omega$ 37'05 $0^{\circ}46'19$ minimum elong -2389 Oct 08 j 07:47 25° My 37'22 0°38'38 -2397 Aug 31 j 23:44 18° **Ω**34'28 19.40175 AU max. Earth dist. conjunction -2397 Dec 17 j 15:33 $22^{\circ}\Omega$ 57'50 -2389 Oct 08 j 07:47 25° m 37'22 0°38'39 retrograde minimum elong opposition -2396 Feb 29 j 17:01 20° **Ω**56'31 0°51'40 max. Earth dist. -2389 Oct 08 j 08:00 25° m 37'24 19.81599 AU min. Earth dist. -2396 Mar 01 j 06:29 20°Ω55'05 17.42141 AU retrograde -2388 Jan 23 j 10:30 29° M 51'50 direct -2396 May 16 j 21:05 18°**Ω**51'02 -2388 Apr 07 j 23:44 27° m 51'16 0°41'49 opposition min. Earth dist. -2388 Apr 07 j 21:28 27° m 51'30 17.84896 AU -2396 Sep 05 j 15:35 23° Ω 20'23 0°46'21 -2388 Jun 24 j 06:14 25° Mp 48'23 conjunction direct -2396 Sep 05 j 15:35 23° Ω 20'23 0°46'23 -2388 Oct 10 j 05:13 minimum elong -2396 Sep 05 j 01:22 23° **Ω**18'08 19.44155 AU max. Earth dist. -2396 Dec 21 j 12:47 27°**Ω**40′28 -2388 Oct 11 j 23:33 0°**ჲ**06'33 0°36'32 retrograde conjunction -2395 Mar 05 j 19:20 $25^{\circ}\Omega$ 39'17 $0^{\circ}51'34$ -2388 Oct 11 i 23:33 opposition minimum elong 0°**2**06'33 0°36'31 -2395 Mar 06 j 08:16 $25^{\circ}\Omega$ 37'54 17.46312 AU min. Earth dist. max. Earth dist. -2388 Oct 12 i 03:13 0°**2**07'07 19.88272 AU -2395 May 21 j 23:41 23°**Ω**34'04 direct retrograde -2387 Jan 27 i 04:21 4°**₽**20'08 opposition -2387 Apr 12 j 21:53 2°**£**19'45 0°39'21 -2395 Sep 10 j 13:55 $28^{\circ}\Omega 02'19 = 0^{\circ}46'07$ min. Earth dist. -2387 Apr 12 j 17:34 2°**2**20'11 17.91689 AU conjunction -2395 Sep 10 j 13:55 $28^{\circ}\Omega 02'19 = 0^{\circ}46'08$ direct -2387 Jun 29 j 05:09 0°**£**17'19 minimum elong max. Earth dist. -2395 Sep $10 \text{ j } 00:44 \quad 28^{\circ} \Omega 00'15 \quad 19.48511 \text{ AU}$ -2395 Oct 12 j 18:55 -2387 Oct 16 j 14:18 4°**£**33'54 0°34'13 0°m conjunction retrograde -2395 Dec 26 j 11:46 2° Mp 21'43 minimum elong -2387 Oct 16 j 14:18 4°**£**33'54 0°34'13 4°**2**34'39 19.95186 AU opposition -2394 Mar 10 j 21:19 0° **m** 20'38 0° 51'07 max. Earth dist. -2387 Oct 16 j 19:13 -2386 Jan 31 j 21:24 min. Earth dist. -2394 Mar 11 j 07:33 0° Mp 19'33 17.50828 AU retrograde 8°**£**46'40 -2394 Mar 19 j 00:52 30°RΩ opposition -2386 Apr 17 j 19:34 6°**£**46′25 0°36'39 -2394 May 27 j 03:58 28°**Ω**15'42 -2386 Apr 17 j 13:03 6°**2**47'06 17.98704 AU direct min. Earth dist. -2394 Jul 31 j 02:21 -2386 Jul 04 j 01:21 0° m direct 4°**£**44'28 -2386 Oct 21 j 04:13 8°**≏**59'27 conjunction -2394 Sep 15 j 11:26 2° m/42'44 0°45'34 conjunction 0°31'42 minimum elong -2394 Sep 15 j 11:26 2° Mp 42'44 0°45'36 minimum elong -2386 Oct 21 j 04:13 8°**£**59'27 0°31'42 max. Earth dist. -2394 Sep 15 j 01:06 2° Mp 41'07 19.53192 AU max. Earth dist. -2386 Oct 21 j 12:20 9°**♀**00'42 20.02276 AU retrograde retrograde -2394 Dec 31 j 07:56 7° m 01'22 -2385 Feb 05 j 13:58 13°**£**11'23 opposition -2393 Mar 15 j 23:09 5° Mp 00'23 0°50'19 opposition -2385 Apr 22 j 16:39 11°**2**11'19 0°33'45

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2385 in astronomical counting style is the year 2386 BCE in historical counting style. min. Earth dist. -2385 Apr 22 i 07:55 11° **2**12'13 18.05839 AU minimum elong -2378 Nov 23 j 16:49 13°ML18'20 0°07'06 -2385 Jul 08 j 23:03 behind sun begin -2378 Nov 23 j 10:46 13°ML17'28 direct 9°**₽**09'52 -2378 Nov 23 j 22:51 13°ML19'13 behind sun end -2385 Oct 25 j 17:19 13° **2**23'14 0°29'02 -2378 Nov 24 j 13:28 13°M21'24 20.56594 AU max Earth dist conjunction -2385 Oct 25 j 17:20 13° **2**23'14 0°29'01 -2378 Dec 23 j 01:14 15°M minimum elong -2385 Oct 26 j 02:36 13° \(\Omega\)24'39 20.09451 AU max. Earth dist. retrograde -2377 Mar 12 j 02:16 17° ML 23'58 -2384 Feb 10 j 05:42 17°**2**34'21 retrograde opposition -2377 May 28 j 14:50 15° ML 24'34 0°05'59 opposition -2384 Apr 26 j 12:59 15°**2**34'26 0°30'40 min. Earth dist. -2377 May 27 j 17:35 15°ML26'43 18.59593 AU min. Earth dist. -2384 Apr 26 j 02:40 15°**£**35'30 18.13043 AU -2377 Jun 07 j 20:58 15°RML direct -2384 Jul 12 j 17:14 13°**♀**33'26 direct -2377 Aug 13 j 09:11 13°M26'04 -2377 Oct 14 j 11:28 15°M -2384 Oct 29 j 05:46 17°**£**45'14 0°26'12 conjunction -2384 Oct 29 j 05:46 17°**£**45'14 0°26'11 minimum elong conjunction -2377 Nov 28 j 00:16 17° ML27'22 0°03'49 max. Earth dist. -2384 Oct 29 j 17:40 17° **Ω**47'02 20.16646 AU minimum elong -2377 Nov 28 j 00:15 17°M27'22 0°03'47 retrograde -2383 Feb 13 j 20:42 21°**£**55'31 behind sun begin -2377 Nov 27 j 17:48 17° ML 26'26 opposition -2383 May 01 j 08:36 19°**£**55'46 0°27'26 behind sun end -2377 Nov 28 j 06:43 17° ML 28'18 min. Earth dist. -2383 Apr 30 j 20:08 19°**♀**57'02 18.20202 AU max. Earth dist. -2377 Nov 28 j 22:01 17°ML30'35 20.62544 AU direct -2383 Jul 17 j 12:56 17°**♀**55'12 retrograde -2376 Mar 15 j 12:18 21°M32'20 min. Earth dist. -2376 May 31 j 07:27 19° ML 35'08 18.65471 AU conjunction -2383 Nov 02 j 17:19 22°**£**05'25 0°23'14 opposition -2376 Jun 01 j 05:01 19°M 32'58 minimum elong -2383 Nov 02 j 17:19 22°**£**05'25 0°23'12 direct -2376 Aug 16 j 19:45 17° M 34'45 max. Earth dist. -2383 Nov 03 i 06:09 22° **2**07'21 20.23758 AU retrograde -2382 Feb 18 i 11:04 26° **2**14'54 conjunction -2376 Dec 01 i 07:14 21° M.34'47 0°00'26 opposition -2382 May 06 i 03:38 24° **2**15'16 0°24'04 minimum elong -2376 Dec 01 i 07:13 21° ML34'47 0°00'23 min. Earth dist. -2382 May 05 i 14:04 24°**£**16'38 18.27266 AU behind sun begin -2376 Dec 01 j 00:43 21°M33'51 -2382 Jul 22 j 05:25 22° **2**15'07 -2376 Dec 01 j 13:43 21°M 35'43 direct behind sun end max. Earth dist. -2376 Dec 02 j 06:37 21°MJ38'13 20.68333 AU -2382 Nov 07 j 04:21 26° **2**23'46 0°20'09 -2375 Jan 16 j 16:10 24°ML06'58 conjunction desc. node -2382 Nov 07 j 04:21 26°**£**23'46 0°20'08 -2375 Mar 19 j 23:37 25°M 39'08 retrograde minimum elong -2382 Nov 07 j 19:23 26° \alpha 26'02 20.30746 AU -2375 Jun 05 j 18:23 23°M 39'49 0°-1'-23 max. Earth dist. opposition -2381 Jan 18 j 09:44 -2375 Jun 04 j 18:34 23°ML42'12 18.71166 AU 0°M min. Earth dist. -2381 Feb 23 j 01:01 -2375 Aug 21 j 08:16 21°M41'54 0°M32'27 direct retrograde -2381 Mar 31 j 20:14 30°R <u>Ω</u> -2375 Dec 05 j 13:31 25°ML40'45 0°-2'-57 -2381 May 10 j 21:52 28°**♀**32'55 0°20'35 opposition conjunction -2381 May 10 j 06:08 28°**2**34'31 18.34159 AU -2375 Dec 05 j 13:31 25°ML40'45 min. Earth dist. minimum elong 0°03'01 -2381 Jul 26 j 23:12 26° **△**33'10 -2375 Dec 05 j 07:00 25°M39'49 direct behind sun begin -2381 Oct 31 j 09:59 -2375 Dec 05 j 20:01 25°M41'41 0°M behind sun end max. Earth dist. -2375 Dec 06 j 13:55 25°ML44'20 20.73922 AU conjunction -2381 Nov 11 j 14:28 0°M40'15 0°16'59 retrograde -2374 Mar 24 j 09:02 29° 1.44'34 minimum elong -2381 Nov 11 j 14:28 0°M40'15 0°16'57 min. Earth dist. -2374 Jun 09 j 07:20 27°ML47'42 18.76663 AU max. Earth dist. -2381 Nov 12 j 06:22 0°M42'38 20.37536 AU opposition -2374 Jun 10 j 07:17 27° ML 45'19 0°-5'-2 retrograde -2380 Feb 27 j 13:56 4°M48'09 -2374 Aug 25 j 17:22 25°M47'42 direct -2380 May 14 j 15:26 2°M48'41 0°17'00 opposition min. Earth dist. -2380 May 13 j 23:03 2°M50'20 18.40850 AU -2374 Dec 09 j 19:34 29°M45'27 conjunction 0°M49'16 -2380 Jul 30 j 13:44 -2374 Dec 09 j 19:34 29°M45'27 direct minimum elong 0°06'18 -2374 Dec 09 i 13:23 29° ML44'34 behind sun begin 4°ML54'51 0°13'45 conjunction -2380 Nov 15 j 00:04 behind sun end -2374 Dec 10 j 01:46 29°M 46'20 minimum elong -2380 Nov 15 j 00:04 4°M54'51 0°13'43 max. Earth dist. -2374 Dec 10 j 21:19 29° ML49'13 20.79309 AU behind sun begin -2380 Nov 14 j 20:25 4°M54'19 -2374 Dec 13 j 22:47 0°**∡**¹ behind sun end -2380 Nov 15 i 03:43 4°ML55'23 retrograde -2373 Mar 28 j 19:50 3°**∡**¹48'47 max. Earth dist. -2380 Nov 15 i 17:50 4°ML57'30 20.44111 AU opposition -2373 Jun 14 j 19:18 1°**х** 49'37 0°-8'-39 1°**≯**52'12 18.81924 AU retrograde -2379 Mar 03 j 02:50 9°**ጤ**01'57 min. Earth dist. -2373 Jun 13 j 17:22 -2379 May 19 j 07:52 7°ML02'31 0°13'22 -2373 Aug 12 j 14:57 30°RM opposition min. Earth dist. -2379 May 18 j 13:23 7°ML04'23 18.47302 AU direct -2373 Aug 30 j 03:56 29°M 52'19 direct -2379 Aug 04 j 06:01 5°M03'26 -2373 Sep 16 j 11:21 0°×7 3°**х** 49'04 0°-9'-27 conjunction -2379 Nov 19 j 08:48 9°ML07'32 0°10'28 conjunction -2373 Dec 14 j 01:13 -2379 Nov 19 j 08:48 9°**™**07'32 0°10'25 -2373 Dec 14 j 01:12 3°**х** 49′04 0°09'31 minimum elong minimum elong -2379 Nov 19 j 03:37 -2373 Dec 13 j 19:44 3°**∡¹**48'17 behind sun begin 9°M06'47 behind sun begin -2373 Dec 14 j 06:41 3°**∡**¹49'50 behind sun end -2379 Nov 19 j 13:59 9°M08'17 behind sun end 3°**≯**52'55 20.84423 AU max. Earth dist. -2379 Nov 20 j 03:32 9°**ጤ**10'19 20.50450 AU max. Earth dist. -2373 Dec 15 j 03:41 retrograde -2378 Mar 07 j 14:11 13°M13'53 retrograde -2372 Apr 01 j 05:02 7°**∡**751'57 opposition -2378 May 23 j 23:50 11°M14'28 0°09'41 min. Earth dist. -2372 Jun 17 j 05:19 5°**≯**55'26 18.86892 AU min. Earth dist. -2378 May 23 j 04:53 11°M16'23 18.53546 AU opposition -2372 Jun 18 j 06:55 5°**х** 52′53 0°-12'-13 direct -2378 Aug 08 j 18:34 9°**™**15'41 direct -2372 Sep 02 j 11:55 3°**х** 55′53

conjunction

-2372 Dec 17 j 06:40 7° ₹751'42 0°-12'-38

-2378 Nov 23 j 16:49 13°ML18'20 0°07'09

conjunction

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Earth dist. -2371 Jun 21 j 14:33 9°**∡**57'56 18.91507 AU retrograde -2363 Jul 25 j 15:31 11°**⋜**48'43 -2371 Sep 06 j 20:53 direct 7°**∡**¹58'31 opposition 0°-39'-9 -2363 Jul 24 j 14:15 11°궁51'15 19.10600 AU min. Earth dist. conjunction -2371 Dec 21 j 11:53 11°**x** 53'30 0°-15'-44 direct -2363 Oct 09 j 02:34 9°**る**52'43 minimum elong -2371 Dec 21 j 11:53 11°**х** 53'30 0°15'49 -2371 Dec 21 j 10:23 11° ₹ 53'18 -2362 Jan 22 j 03:10 13°₹43'52 0°-36'-26 behind sun begin conjunction -2371 Dec 21 j 13:22 11° ₹ 53'43 -2362 Jan 22 j 03:10 13°₹43'52 behind sun end minimum elong 0°36'31 max. Earth dist. -2371 Dec 22 j 15:34 11° ₹ 57'31 20.93634 AU max. Earth dist. -2362 Jan 23 j 05:36 13°₹47'38 21.10708 AU retrograde -2370 Apr 09 j 23:51 15°**尽** 55'42 retrograde -2362 May 12 j 16:53 17°**⋜**44'55 opposition min. Earth dist. -2370 Jun 26 j 01:52 13°**尽** 59'25 18.95716 AU -2362 Jul 29 j 22:28 15°**정**45'35 0°-41'-20 opposition -2370 Jun 27 j 04:14 13°**尽** 56'47 0°-19'-6 min. Earth dist. -2362 Jul 28 j 22:35 15°**⋜**47'59 19.10817 AU direct -2370 Sep 11 j 04:21 12° ₹ 00'20 direct -2362 Oct 13 j 06:22 13°₹49'34 conjunction -2370 Dec 25 i 16:59 15° ₹ 54'33 0°-18'-46 conjunction -2361 Jan 26 j 08:16 17°る40'38 0°-38'-20 minimum elong -2370 Dec 25 j 16:59 15° ₹ 54'33 0°18'50 minimum elong -2361 Jan 26 j 08:16 17°る40'38 0°38'24 max. Earth dist. -2370 Dec 26 j 21:04 15° ₹ 58'37 20.97617 AU max. Earth dist. -2361 Jan 27 j 10:15 17°る44'20 21.10738 AU retrograde -2369 Apr 14 j 10:31 19° ₹ 56'27 retrograde -2361 May 17 j 01:31 21°る41'48 min. Earth dist. -2369 Jun 30 i 10:38 18° ₹ 00'20 18.99453 AU min. Earth dist. -2361 Aug 02 i 04:47 19°る44'50 19.10649 AU -2369 Jul 01 j 14:06 17° ₹ 57'36 0°-22'-23 -2361 Aug 03 j 05:03 19°る42'24 0°-43'-20 opposition opposition -2369 Sep 15 j 12:16 16° ₹01'20 -2361 Oct 17 j 11:55 17°る46'19 direct direct -2369 Dec 29 j 22:04 19° \$\frac{7}{5}4'54 0°-21'-42 -2360 Jan 30 j 13:39 21°る37'26 0°-40'-3 conjunction conjunction -2369 Dec 29 j 22:04 19° **x** 54'54 0°21'46 -2360 Jan 30 j 13:39 21°₹37'26 0°40'06 minimum elong minimum elong -2369 Dec 31 j 02:02 19° ₹ 58'56 21.01083 AU -2360 Jan 31 j 15:02 21°정41'03 21.10364 AU max. Earth dist. max. Earth dist. -2360 May 20 j 08:24 25°♂38'46 -2368 Apr 17 j 17:44 23°**尽** 56'33 retrograde retrograde -2368 Jul 04 j 23:27 21°**х** 57'43 0°-25'-34 -2360 Aug 06 j 11:25 23°♂39'18 0°-45'-7 opposition opposition -2368 Jul 03 j 21:15 22°notation 700'19 19.02657 AU min. Earth dist. min. Earth dist. -2360 Aug 05 j 12:45 23°중41'35 19.10081 AU -2368 Sep 18 j 19:03 20° ₹ 01'37 -2360 Oct 20 j 15:26 21°정43'12 direct direct -2359 Feb 02 j 19:20 25° 중34'28 0°-41'-34 -2367 Jan 02 j 03:07 23°**x** 54'34 0°-24'-30 conjunction conjunction -2367 Jan 02 j 03:07 23°**尽** 54'34 0°24'34 -2359 Feb 02 j 19:20 25° **정**34'28 0°41'38 minimum elong minimum elong max. Earth dist. -2367 Jan 03 j 06:56 23° ₹758'34 21.04011 AU max. Earth dist. -2359 Feb 03 j 19:58 25°る37'58 21.09612 AU retrograde -2367 Apr 22 j 04:08 27°**尽** 56'00 retrograde -2359 May 24 j 17:18 29°♂36'03 min. Earth dist. -2367 Jul 08 j 05:24 25°**尽** 59'50 19.05297 AU opposition -2359 Aug 10 j 17:42 27° 36'32 0°-46'-42 opposition -2367 Jul 09 j 08:20 25°**х** 57'08 0°-28'-36 min. Earth dist. -2359 Aug 09 j 18:55 27°**궁**38'50 19.09122 AU -2367 Sep 23 j 02:35 24° ₹ 01'09 -2359 Oct 24 j 20:20 25°₹40'22 direct direct -2366 Jan 06 j 07:51 27° ₹753'34 0°-27'-12 -2358 Feb 07 j 01:15 29° 중31'53 0°-42'-54 conjunction conjunction -2366 Jan 06 j 07:51 27° **₹** 53'34 0°27'17 -2358 Feb 07j01:15 29°る31'53 0°42'57 minimum elong minimum elong -2366 Jan 07 j 11:24 27° ₹757'31 21.06358 AU -2358 Feb 08 j 01:08 29°る35'17 21.08440 AU max. Earth dist. max. Earth dist. -2366 Feb 13 i 21:55 0°궁 -2358 Feb 15 i 07:13 0°≈ retrograde -2366 Apr 26 j 10:28 1°る54'50 retrograde -2358 May 29 i 00:50 3°≈33'47 -2366 Jul 11 j 23:56 30°R ✓ min. Earth dist. -2358 Aug 14 j 03:07 1°≈36'21 19.07736 AU -2366 Jul 13 i 16:57 29° ₹755'54 0°-31'-29 -2358 Aug 15 i 00:04 1°≈34'14 0°-48'-4 opposition opposition min. Earth dist. -2366 Jul 12 j 15:22 29° ₹758'28 19.07370 AU -2358 Sep 29 j 05:54 30°Rる direct -2366 Sep 27 j 08:12 27° ₹ 59'58 -2358 Oct 28 j 23:57 29°る38'01 direct -2366 Dec 07 j 16:21 -2358 Nov 27 j 05:13 0°≈≈ conjunction -2365 Jan 10 j 12:43 1°る51'55 0°-29'-44 conjunction -2357 Feb 11 j 07:53 3°≈29'53 0°-44'-2 minimum elong -2365 Jan 10 j 12:43 1°る51'55 0°29'48 minimum elong -2357 Feb 11 j 07:53 3°≈29'53 0°44'06 -2365 Jan 11 j 16:04 -2357 Feb 12 j 06:37 max. Earth dist. 1°る55'50 21.08170 AU max. Earth dist. 3°≈33'07 21.06843 AU -2365 Apr 30 j 19:53 5°る53'02 -2357 Jun 02 j 10:30 retrograde retrograde 7°≈32'09 -2365 Jul 16 j 22:41 3°る56'38 19.08919 AU -2357 Aug 18 j 09:37 5°≈34'38 19.05902 AU min. Earth dist. min. Earth dist. -2365 Jul 18 j 00:49 3°**る**54'01 0°-34'-13 opposition opposition -2357 Aug 19 j 06:09 5°**≈**32'33 0°-49'-12 -2365 Oct 01 j 15:32 1°る58'05 -2357 Nov 02 j 04:56 direct direct 3°**≈**36′15 conjunction -2364 Jan 14 j 17:30 5°る49'40 0°-32'-8 conjunction -2356 Feb 15 j 15:01 7°**≈**28'35 0°-44'-57 minimum elong -2364 Jan 14 j 17:30 5°**る**49'40 0°32'13 minimum elong -2356 Feb 15 j 15:01 7°≈28'35 0°45'01 max. Earth dist. -2364 Jan 15 j 20:31 5°る53'32 21.09460 AU max. Earth dist. -2356 Feb 16 j 12:29 7°≈31'39 21.04758 AU -2364 May 04 j 01:54 9°**る**50'43 -2356 Jun 05 j 18:19 11°≈31'17 retrograde retrograde

min. Earth dist.

-2364 Jul 20 j 07:44

7°る54'03 19.09977 AU

opposition

-2356 Aug 22 j 12:29

9°≈31'38 0°-50'-6

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Attention, astronomical year style is used: The year -2356 in astronomical counting style is the year 2357 BCE in historical counting style.

min. Earth dist. -2356 Aug 21 j 18:13 9°×33'29 19.03562 AU max. Earth dist. -2348 Mar 20 j 04:38 9° +51'04 20.70762

Attention, astronom	ical year style is used: Tl	ne year -2356	in astronomical cou	inting style is the year	2357 BCE in historical of	counting style	
min. Earth dist.	-2356 Aug 21 j 18:13	9° ≈ 33'29	19.03562 AU	max. Earth dist.	-2348 Mar 20 j 04:38	9°) 51′04	20.70763 AU
direct	-2356 Nov 05 j 08:45	7° ≈ 35'13		retrograde	-2348 Jul 09 j 03:43	13° ¥ 57'17	
				opposition	-2348 Sep 23 j 19:08	11°) 56′24	0°-48'-18
conjunction	-2355 Feb 18 j 22:37	11° ≈ 28′05	0°-45'-39	min. Earth dist.	-2348 Sep 23 j 13:35	11° ¥ 56′59	18.67919 AU
minimum elong	-2355 Feb 18 j 22:37	11° ≈ 28′05	0°45'43	direct	-2348 Dec 07 j 07:40	9°) 57'43	
max. Earth dist.	-2355 Feb 19 j 18:26	11° ≈ 30'55	21.02166 AU				
	-2355 May 05 j 00:31	15° ≈		conjunction	-2347 Mar 24 j 09:41	13° ¥ 57'38	0°-43'-3
retrograde	-2355 Jun 10 j 04:49	15° ≈ 31'15		minimum elong	-2347 Mar 24 j 09:41	13° ¥ 57'38	0°43'05
	-2355 Jul 16 j 20:44	15°R≈		max. Earth dist.	-2347 Mar 24 j 14:57	13° ¥ 58′23	20.65024 AU
opposition	-2355 Aug 26 j 18:51	13° ≈ 31'31	0°-50'-46	retrograde	-2347 Jul 13 j 17:26	18°) €05'43	
min. Earth dist.	-2355 Aug 26 j 01:19	13° ≈ 33'18	19.00698 AU	opposition	-2347 Sep 28 j 03:09	16°) 04'40	0°-46'-56
direct	-2355 Nov 09 j 14:24	11° ≈ 34'56		min. Earth dist.	-2347 Sep 27 j 22:38	16° ₩ 05'08	18.62088 AU
	-2354 Feb 14 j 23:09	15° ≈		direct	-2347 Dec 11 j 16:02	14°) €05'39	
conjunction	-2354 Feb 23 j 06:54			conjunction	-2346 Mar 28 j 23:22		
minimum elong	-2354 Feb 23 j 06:54			minimum elong	-2346 Mar 28 j 23:22		
max. Earth dist.	-2354 Feb 24 j 01:08		20.99024 AU	max. Earth dist.	-2346 Mar 29 j 03:23		20.59104 AU
retrograde	-2354 Jun 14 j 12:43			retrograde	-2346 Jul 18 j 05:23		
min. Earth dist.	-2354 Aug 30 j 10:15			opposition	-2346 Oct 02 j 11:36		
opposition	-2354 Aug 31 j 01:21		0°-51'-10	min. Earth dist.	-2346 Oct 02 j 09:08		18.56086 AU
direct	-2354 Nov 13 j 18:47	15° ≈ 35'27		direct	-2346 Dec 15 j 22:57	18° ₩ 15'11	
	2252 F. L. 25 : 15 : 5	10020120	00.461.24		2245 4 02:12.5:	2201/17/12	00.401.6
conjunction	-2353 Feb 27 j 15:46			conjunction	-2345 Apr 02 j 13:54		
minimum elong	-2353 Feb 27 j 15:46			minimum elong	-2345 Apr 02 j 13:54		
max. Earth dist.	-2353 Feb 28 j 07:57		20.95359 AU	max. Earth dist.	-2345 Apr 02 j 15:16		20.53040 AU
retrograde	-2353 Jun 18 j 23:42			retrograde	-2345 Jul 22 j 20:20		
opposition	-2353 Sep 04 j 07:53	21° ≈ 33'48	0°-51'-20	opposition	-2345 Oct 06 j 20:34	24° ∺ 26′07	0°-43'-26
min. Earth dist.	-2353 Sep 03 j 17:46	21° ≈ 35'15	18.93351 AU	min. Earth dist.	-2345 Oct 06 j 19:28	24°) €26'14	18.49940 AU
direct	-2353 Nov 18 j 01:01	19° ≈ 36'45		direct	-2345 Dec 20 j 08:37	22° ∺ 26′27	
conjunction	-2352 Mar 03 j 01:12	23° ≈ 31'42	0°-46'-25	conjunction	-2344 Apr 06 j 05:21		0°-38'-17
minimum elong	-2352 Mar 03 j 01:12	23° ≈ 31'42	0°46'29	minimum elong	-2344 Apr 06 j 05:21		0°38'18
max. Earth dist.	-2352 Mar 03 j 15:45	23° ≈ 33'46	20.91176 AU	max. Earth dist.	-2344 Apr 06 j 05:29	26° ∺ 30′21	20.46806 AU
retrograde	-2352 Jun 22 j 08:04	27° ≈ 36′25			-2344 Jun 15 j 19:32	0 ° Υ	
opposition	-2352 Sep 07 j 14:30	25° ≈ 36′15	0°-51'-14	retrograde	-2344 Jul 26 j 09:43	0° Υ 40'54	
min. Earth dist.	-2352 Sep 07 j 02:47	25° ≈ 37'27	18.88937 AU		-2344 Sep 05 j 10:42	30°₽)	
direct	-2352 Nov 21 j 06:07	23° ≈ 38'54		opposition	-2344 Oct 10 j 06:07	28°) 39'33	0°-41'-19
				min. Earth dist.	-2344 Oct 10 j 07:08	28° ∺ 39'27	18.43621 AU
conjunction	-2351 Mar 07 j 11:08	27°≈34'40	0°-46'-13	direct	-2344 Dec 23 j 17:18	26°) 39'35	
minimum elong	-2351 Mar 07 j 11:08				-2343 Mar 29 j 00:50	$0^{\circ}\Upsilon$	
max. Earth dist.	-2351 Mar 07 j 23:38		20.86570 AU				
	-2351 Apr 21 j 16:10	0°) €		conjunction	-2343 Apr 10 j 21:42	0° Υ 44'55	0°-36'-15
retrograde	-2351 Jun 26 j 19:20	1° ∺ 39'59		minimum elong	-2343 Apr 10 j 21:42	0° Υ 44'55	0°36'16
retrograde	-2351 Sun 20 j 17:20 -2351 Sep 03 j 14:27	30°R≈		max. Earth dist.	-2343 Apr 10 j 18:49		20.40416 AU
opposition	-2351 Sep 03 j 14.27 -2351 Sep 11 j 21:16	29°≈39'37	0°-50'-53	retrograde	-2343 Jul 31 j 01:26	4° Υ 56'22	20.40410 AU
				•	-	2° Υ 54'55	00 201 57
min. Earth dist.	-2351 Sep 11 j 10:29		18.84136 AU	opposition min. Earth dist.	-2343 Oct 14 j 16:15		0°-38'-57
direct	-2351 Nov 25 j 12:41	27°≈41'56			-2343 Oct 14 j 19:00	2° γ 54 38 0° γ 54'36	18.37142 AU
	-2350 Feb 10 j 09:55	0° ₩		direct	-2343 Dec 28 j 04:10	0 1 34 30	
conjunction	-2350 Mar 11 j 21:41	1° ¥ 38'37	0°-45'-46	conjunction	-2342 Apr 15 j 15:11	5° Ƴ 01'27	0°-34'00
minimum elong	-2350 Mar 11 j 21:41	1° ∺ 38'37		minimum elong	-2342 Apr 15 j 15:11	5° Υ 01'27	0°34'00
max. Earth dist.	-2350 Mar 11 j 21:41 -2350 Mar 12 j 08:47		20.81587 AU	max. Earth dist.	-2342 Apr 15 j 10:52		20.33832 AU
		5°) (40'13	20.81387 AU			9° Υ 13'47	20.33632 AU
retrograde	-2350 Jul 01 j 04:51		00 501 17	retrograde	-2342 Aug 04 j 16:27		00.261.21
opposition	-2350 Sep 16 j 04:21	3°) 44'01	0°-50'-17	opposition	-2342 Oct 19 j 03:07	7°Υ12'15	0°-36'-21
min. Earth dist.	-2350 Sep 15 j 19:45		18.78988 AU	min. Earth dist.	-2342 Oct 19 j 08:03		18.30453 AU
direct	-2350 Nov 29 j 18:20	1° ¥ 46′01		direct	-2341 Jan 01 j 15:18	5° Ƴ 11'34	
conjunction	-2349 Mar 16 j 09:01	5°) 43'41	0°-45'-6	conjunction	-2341 Apr 20 j 09:33	9° Ƴ 19'56	0°-31'-32
minimum elong	-2349 Mar 16 j 09:01	5° X 43'41	0°45'08	-	-2341 Apr 20 j 09:33	9 γ 1936 9° γ 19'56	0°31'31
_				minimum elong			
max. Earth dist.	-2349 Mar 16 j 17:55		20.76307 AU	max. Earth dist.	-2341 Apr 20 j 01:44		20.27051 AU
retrograde	-2349 Jul 05 j 17:07	9° ¥ 50′18	00 40: 27	retrograde	-2341 Aug 09 j 08:36	13° Y 33′09	00.221.25
opposition	-2349 Sep 20 j 11:28	7°) 49'34		opposition	-2341 Oct 23 j 14:34	11° Υ 31'29	
min. Earth dist.	-2349 Sep 20 j 03:53		18.73573 AU	min. Earth dist.	-2341 Oct 23 j 21:30		18.23581 AU
direct	-2349 Dec 04 j 01:37	5° ¥ 51'12		direct	-2340 Jan 06 j 03:35	9° Ƴ 30'24	
	2240 M 10 : 21 05	001/40/50	00 44! 11	aamiuw -+:	2240 A 24:04.56	1200040101	00 201 52
conjunction	-2348 Mar 19 j 21:05	9° \(\) 49'59		conjunction	-2340 Apr 24 j 04:56		

minimum elong

-2340 Apr 24 j 04:56 13°**Υ**40'21 0°28'53

minimum elong

-2348 Mar 19 j 21:05 9° **∺** 49'59 0°44'13

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2340 in astronomical counting style is the year 2341 BCE in historical counting style. -2340 Apr 23 j 19:45 13°**Υ**39'00 20.20087 AU retrograde -2333 Sep 14 j 10:35 19°814'21 max. Earth dist. -2340 Aug 13 j 01:12 17°Υ54'24 -2333 Nov 27 j 11:12 17°**8**11'45 0°-4'-33 retrograde opposition -2340 Oct 27 j 02:47 15°**Υ**'52'36 0°-30'-28 min. Earth dist. -2333 Nov 28 j 06:39 17°809'38 17.69064 AU opposition -2340 Oct 27 j 11:35 15°**Y**51'40 18.16542 AU -2332 Feb 10 j 14:50 15°**8**07'20 min. Earth dist. direct -2339 Jan 09 j 17:06 13°**Y**51'06 direct -2332 May 31 j 19:26 19°829'54 0°-2'-18 conjunction -2339 Apr 29 j 00:49 18° Υ 02'36 0°-26'-1 -2332 May 31 j 19:26 19°**8**29'54 0°02'17 conjunction minimum elong minimum elong -2339 Apr 29 j 00:49 18°**Y**02'36 -2332 May 31 j 12:39 19°**8**28'54 0°26'01 behind sun begin -2339 Apr 28 j 12:14 18°**Υ**00'45 20.13003 AU -2332 Jun 01 j 02:14 19°**8**30'55 max. Earth dist. behind sun end -2339 Aug 17 j 17:42 22°**℃**17'32 retrograde max. Earth dist. -2332 May 30 j 20:03 19°**8**26'21 19.66156 AU opposition -2339 Oct 31 j 15:37 20° **Y** 15'34 0° -27'-13 retrograde -2332 Sep 18 j 09:11 23°850'16 -2339 Nov 01 j 02:28 20°**Y**14'24 18.09422 AU -2332 Dec 01 j 05:09 21°**8**47'40 0°00'-27 min. Earth dist. opposition -2338 Jan 14 j 06:55 18°**Y**13'37 -2332 Dec 02 j 00:44 21°845'32 17.63357 AU direct min. Earth dist. asc. node -2331 Jan 11 j 08:37 20° 812'58 conjunction -2338 May 03 j 21:55 22°**Y**26'43 0°-23'00 direct -2331 Feb 14 j 11:41 19°**8**42'58 minimum elong -2338 May 03 j 21:55 22°**Υ**26'43 0°23'00 max. Earth dist. -2338 May 03 j 08:17 22°**Y**24'42 20.05859 AU conjunction -2331 Jun 05 j 21:23 24°**8**07'01 0°01'31 retrograde -2338 Aug 22 j 11:39 26°**Y**'42'27 minimum elong -2331 Jun 05 j 21:24 24°**8**07'01 0°01'34 opposition -2338 Nov 05 j 05:00 24°**Υ**'40'21 0°-23'-47 behind sun begin -2331 Jun 05 j 14:36 24°**8**06'01 min. Earth dist. -2338 Nov 05 j 17:23 24°**Y**39'01 18.02275 AU behind sun end -2331 Jun 06 j 04:12 24°**8**08'02 direct -2337 Jan 18 j 22:32 22°**Y**37'57 max. Earth dist. -2331 Jun 04 j 20:14 24°803'11 19.60636 AU retrograde -2331 Sep 23 j 06:32 28°828'04 conjunction -2337 May 08 j 19:38 26°**Υ**'52'39 0°-19'-50 opposition -2331 Dec 06 j 00:05 26°\(\delta 25'30 \) 0°03'41 minimum elong $-2337 \text{ May } 08 \text{ j } 19:38 \quad 26^{\circ} \Upsilon 52'39$ 0°19'49 min. Earth dist. -2331 Dec 06 j 21:35 26°\(\mathbf{2}23'09\) 17.58032 AU max. Earth dist. -2337 May 08 j 02:47 26° Υ 50'08 19.98739 AU direct -2330 Feb 19 j 07:15 24°**8**20'32 -2337 Jul 05 i 22:50 0° 8 max. Earth dist. -2330 Jun 09 j 22:24 28° 842'04 19.55494 AU -2337 Aug 27 j 04:48 1°809'13 retrograde -2337 Oct 19 j 14:39 30°R℃ -2330 Jun 11 j 00:13 28° \$\frac{3}{46} \text{02} 0°05'16 conjunction opposition -2337 Nov 09 j 19:11 29°Υ06'57 0°-20'-11 -2330 Jun 11 j 00:12 28°**8**46'02 minimum elong 0°05'18 -2337 Nov 10 j 09:33 29°**Υ**05'24 17.95205 AU -2330 Jun 10 j 17:39 28°845'03 min. Earth dist. behind sun begin -2330 Jun 11 j 06:46 28°847'01 -2336 Jan 23 j 14:09 27°**Y**04'06 direct behind sun end -2336 Apr 20 j 01:51 -2330 Jul 01 j 06:42 0°႘ Π $^{\circ}$ 0 3°**Ⅲ**07'41 -2330 Sep 28 j 06:52 retrograde -2330 Dec 10 j 19:39 -2336 May 12 j 18:06 1°**8**20'24 0°-16'-31 1°**I**05'10 0°07'51 conjunction opposition -2330 Dec 11 j 17:14 -2336 May 12 j 18:06 1°**8**20'24 0°16'30 1°**I**02'48 17.53066 AU minimum elong min. Earth dist. -2336 May 12 j 00:39 1°**8**17'47 19.91722 AU -2329 Jan 05 j 22:52 30°R ₩ max. Earth dist. -2336 Aug 30 j 23:52 5°**8**37'45 -2329 Feb 24 j 06:17 28°**8**59'57 retrograde direct opposition -2336 Nov 13 j 10:01 3°**8**35'22 0°-16'-27 -2329 Apr 13 j 13:08 $\Pi^{\circ}0$ min. Earth dist. -2336 Nov 14 j 01:20 3°**8**33'43 17.88268 AU max. Earth dist. -2329 Jun 15 j 00:29 3°**П**22'38 19.50694 AU direct -2335 Jan 27 j 07:44 1°**8**32'06 -2329 Jun 16 j 03:35 conjunction 3°**П**26'49 0°08'58 -2335 May 17 j 17:16 5°**8**49'58 0°-13'-6 minimum elong -2329 Jun 16 j 03:35 3°**Ⅱ**26'49 0°09'02 conjunction -2335 May 17 j 17:16 5°**8**49'58 0°13'05 behind sun begin -2329 Jun 15 j 21:50 3°**Ⅲ**25'57 minimum elong -2335 May 17 j 13:22 5°**8**49'24 behind sun end -2329 Jun 16 j 09:19 3°**I**I27'41 behind sun begin behind sun end -2335 May 17 j 21:10 5°**8**50'33 -2329 Oct 03 j 04:52 7°**Ⅱ**49'01 retrograde -2335 May 16 j 21:01 5°846'56 19.84889 AU -2329 Dec 15 i 16:21 5°**Ⅱ**46'32 0°11'59 max. Earth dist. opposition -2335 Sep 04 i 18:04 10°808'08 5°**Ц**43'58 17.48452 AU retrograde min. Earth dist. -2329 Dec 16 i 15:50 -2335 Nov 18 i 01:35 opposition 8°**8**05'37 0°-12'-35 direct -2328 Feb 29 i 03:15 3°**Ⅱ**41'05 8°**Д**04'51 19.46249 AU min. Earth dist. -2335 Nov 18 j 18:47 8°**と**03'46 17.81568 AU max. Earth dist. -2328 Jun 19 j 03:10 direct -2334 Feb 01 j 00:53 6°801'55 conjunction -2328 Jun 20 i 07:12 8°II09'11 0°12'39 -2334 May 22 j 17:21 10°821'24 0°-9'-34 minimum elong -2328 Jun 20 i 07:12 8°**Ⅲ**09'11 0°12'42 conjunction -2334 May 22 j 17:21 10°**8**21'24 0°09'33 -2328 Jun 20 j 03:02 8°**Ⅲ**08'34 minimum elong behind sun begin -2334 May 22 j 11:46 10°**8**20'35 8°**Ⅱ**09'49 behind sun begin behind sun end -2328 Jun 20 j 11:21 -2334 May 22 j 22:56 10°**8**22'13 behind sun end retrograde -2328 Oct 07 j 05:47 12°**Ц**31'52 -2328 Dec 19 j 13:39 10°**Д**29'25 0°16'04 max. Earth dist. -2334 May 21 j 20:39 10°**8**18'17 19.78317 AU opposition retrograde -2334 Sep 09 j 14:47 14°**8**40'18 min. Earth dist. -2328 Dec 20 j 12:57 10°**Ц**26'51 17.44180 AU -2334 Nov 22 j 17:57 12°\begin{align*} 337'45 0°-8'-37 \end{align*} direct -2327 Mar 05 j 04:33 8°**Ⅲ**23'44 opposition -2334 Nov 23 j 11:38 12°**8**35'49 17.75143 AU max. Earth dist. -2327 Jun 24 j 06:48 12°**Д**48'31 19.42140 AU min. Earth dist. -2333 Feb 05 j 20:16 10°**8**33'40 direct -2327 Jun 25 j 11:25 12°**I** 52'57 0°16'16 conjunction conjunction -2333 May 27 j 18:00 14°\(254'42\) 0°-5'-59 minimum elong -2327 Jun 25 j 11:25 12°**I**52'57 0°16'19 -2333 May 27 j 18:00 14°**8**54'42 minimum elong 0°05'57 retrograde -2327 Oct 12 j 04:03 17°**Ⅲ**16'01 behind sun begin -2333 May 27 j 11:32 14°**8**53'45 opposition -2327 Dec 24 j 11:43 15°**Ⅱ**13'35 0°20'04 behind sun end -2333 May 28 j 00:28 14°**8**55'39 min. Earth dist. -2327 Dec 25 j 12:44 15°**Ⅲ**10'50 17.40261 AU max. Earth dist. -2333 May 26 j 18:57 14°851'12 19.72051 AU direct -2326 Mar 10 j 03:38 13°**Д**07'39 -2333 May 29 j 04:55 15°**8** max. Earth dist. -2326 Jun 29 j 10:01 17°**Д**33'14 19.38410 AU

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2326 in astronomical counting style is the year 2327 BCE in historical counting style. -2326 Jun 30 j 15:51 17°**Д**37'53 0°19'47 minimum elong -2318 Aug 08 j 23:44 25°555'53 0°41'27 conjunction -2326 Jun 30 j 15:51 17°**Ⅲ**37'53 max. Earth dist. -2318 Aug 07 j 22:50 25°\$51'57 19.27252 AU minimum elong 0°19'51 -2326 Oct 17 j 04:58 22° **II** 01'15 -2318 Oct 29 j 07:54 retrograde $0^{\circ}\Omega$ 0°**£**19′03 -2326 Dec 29 j 10:25 19°**Ц**58'49 0°23'56 -2318 Nov 24 j 06:36 retrograde opposition -2326 Dec 30 j 11:03 19°**Д**56'07 17.36727 AU -2318 Dec 20 j 16:08 30°RS min. Earth dist. -2325 Mar 15 j 07:09 17°**Ц**52'40 -2317 Feb 05 j 18:07 direct opposition 28°**©**17'01 0°47'06 min. Earth dist. -2317 Feb 06 j 15:20 28°514'43 17.27953 AU -2325 Jul 05 j 20:24 22°**Ⅲ**23'46 0°23'11 conjunction direct -2317 Apr 23 j 11:32 26°9510'24 -2325 Jul 05 j 20:24 22°**Ⅲ**23'46 0°23'14 minimum elong -2317 Aug 02 j 15:06 $0^{\circ}\Omega$ max. Earth dist. -2325 Jul 04 j 14:59 22°**П**19'10 19.35073 AU max. Earth dist. -2317 Aug 13 j 03:35 0°**Ω**39'50 19.28723 AU retrograde -2325 Oct 22 j 03:26 26° **1**47'21 -2324 Jan 03 j 09:52 24°**П**44'54 0°27'39 -2317 Aug 14 j 02:13 opposition conjunction 0°**Ω**43'25 0°42'59 -2324 Jan 04 j 11:40 24°**II**42'05 17.33615 AU -2317 Aug 14 j 02:13 min. Earth dist. minimum elong 0°**Ω**43′25 0°43'02 -2317 Nov 29 j 08:15 direct -2324 Mar 19 j 08:17 22°**Ⅲ**38'33 retrograde 5°**Ω**06′16 opposition max. Earth dist. -2324 Jul 08 j 18:28 27°**Ⅲ**05'36 19.32201 AU -2316 Feb 10 j 20:37 3°**Ω**04'24 0°48'42 min. Earth dist. -2316 Feb 11 j 16:06 3°**Ω**02'18 17.29712 AU conjunction -2324 Jul 10 j 00:52 27°**Д**10'22 0°26'26 direct -2316 Apr 27 j 16:17 $0^{\circ} \Omega 58'00$ minimum elong -2324 Jul 10 j 00:52 27° **II** 10'22 0°26'30 max. Earth dist. -2316 Aug 17 j 06:41 5°**Ω**27'12 19.30772 AU -2324 Aug 27 j 15:53 0ಂತಾ retrograde -2324 Oct 26 j 04:22 1°534'06 conjunction -2316 Aug 18 j 04:16 5°**Ω**30'37 0°44'16 -2324 Dec 27 j 12:13 30°RII minimum elong -2316 Aug 18 j 04:15 5°**Ω**30'37 0°44'19 opposition -2323 Jan 07 i 09:38 29°**Ⅲ**31'38 0°31'11 retrograde -2316 Dec 03 i 07:44 9°**Ω**53'06 min. Earth dist. -2323 Jan 08 i 10:48 29°**Д**28'53 17.30994 AU opposition -2315 Feb 14 i 23:11 7°Ω51'24 0°49'57 direct -2323 Mar 24 i 12:56 27° **II**25'06 min. Earth dist. -2315 Feb 15 i 18:06 7°**Ω**49'22 17.32042 AU -2323 Jun 13 i 00:57 0ಂಣ direct -2315 May 02 j 19:36 5°**Ω**45'12 -2323 Jul 14 j 00:16 1°952'55 19.29831 AU max. Earth dist. -2315 Aug 22 j 09:59 10° Ω14'09 19.33361 AU max. Earth dist. -2323 Jul 15 j 05:25 1°957'30 0°29'30 -2315 Aug 23 j 05:48 10° Ω17'17 conjunction conjunction 0°45'15 -2323 Jul 15 j 05:25 -2315 Aug 23 j 05:47 $10^{\circ}\Omega$ 17'17 minimum elong 1°957'30 0°29'34 minimum elong 0°45'17 -2315 Dec 08 j 08:37 14° Ω39'18 -2323 Oct 31 j 03:39 retrograde 6°9521'17 retrograde -2322 Jan 12 j 10:07 -2314 Feb 20 j 01:54 12° **Ω**37'47 0°50'51 opposition 4°9518'50 0°34'30 opposition -2314 Feb 20 j 18:41 $12^{\circ}\Omega$ 35'59 17.34861 AU min. Earth dist. -2322 Jan 13 j 11:46 4°516'02 17.28893 AU min. Earth dist. -2314 May 08 j 01:24 10°**Ω**31'50 -2322 Mar 29 j 15:42 2°9512'08 direct direct -2314 Aug 27 j 10:20 15°**Ω** -2322 Jul 19 j 03:52 6°5940'17 19.28017 AU max. Earth dist. -2322 Jul 20 j 09:37 6°5944'58 0°32'22 -2314 Aug 28 j 06:37 15° Ω 03'12 0°45'54 conjunction conjunction -2322 Jul 20 j 09:37 -2314 Aug 28 j 06:37 15° Ω 03'12 0°45'57 minimum elong 6°5944'58 0°32'26 minimum elong -2314 Aug 27 j 12:26 15°**Ω**00'20 19.36410 AU retrograde -2322 Nov 05 j 04:19 11°508'46 max. Earth dist. opposition -2321 Jan 17 j 10:54 9°506'19 0°37'35 retrograde -2314 Dec 13 j 06:48 19°**\O2**4'43 min. Earth dist. -2321 Jan 18 j 11:39 9°903'37 17.27386 AU opposition -2313 Feb 25 j 04:45 $17^{\circ}\Omega$ 23'19 $0^{\circ}51'24$ direct -2321 Apr 03 j 20:20 6°959'30 min. Earth dist. -2313 Feb 25 j 20:59 17°**Ω**21'35 17.38137 AU max. Earth dist. -2321 Jul 24 j 09:59 11°528'17 19.26817 AU -2313 May 13 j 04:56 15° **Ω**17'38 direct -2321 Jul 25 j 13:44 11°532'39 0°35'00 -2313 Sep 02 j 06:44 19° **Ω**48'08 0°46'14 conjunction conjunction -2321 Jul 25 j 13:44 11°532'39 -2313 Sep 02 j 06:44 19° **Ω**48'08 0°46'16 minimum elong minimum elong -2321 Nov 10 i 04:38 15°\$56'22 -2313 Sep 01 j 14:01 19° Ω 45'30 19.39905 AU retrograde max. Earth dist. -2313 Dec 18 i 06:39 $24^{\circ}\Omega$ 09'03 opposition -2320 Jan 22 j 12:19 13°\$53'58 0°40'24 retrograde -2312 Mar 01 j 07:18 $22^{\circ}\Omega$ 07'47 $0^{\circ}51'36$ min. Earth dist. -2320 Jan 23 j 12:34 13°551'19 17.26509 AU opposition direct -2320 Apr 08 j 00:04 11°5547'07 min. Earth dist. -2312 Mar 01 j 21:00 22° Ω 06'19 17.41825 AU direct -2312 May 17 j 10:53 $20^{\circ}\Omega$ 02'21 -2320 Jul 29 i 17:15 16°\$20'25 0°37'24 conjunction -2320 Jul 29 j 17:15 16°\$20'25 0°37'27 -2312 Sep $06 \text{ j } 06:02 \quad 24^{\circ} \Omega 31'52 \quad 0^{\circ} 46'16$ minimum elong conjunction max. Earth dist. -2320 Jul 28 j 13:32 16°5016'02 19.26279 AU -2312 Sep $06 \text{ j } 06:02 \quad 24^{\circ} \Omega 31'52 \quad 0^{\circ} 46'17$ minimum elong retrograde -2320 Nov 14 j 05:07 20°544'01 max. Earth dist. -2312 Sep 05 j 15:32 $24^{\circ}\Omega 29'35$ 19.43788 AU opposition -2319 Jan 26 j 13:56 18°5541'41 0°42'56 retrograde -2312 Dec 22 j 03:39 $28^{\circ}\Omega 52'06$ min. Earth dist. -2319 Jan 27 j 13:09 18°\$39'10 17.26319 AU opposition -2311 Mar 06 j 09:47 26° $\Omega 50'56$ $0^{\circ}51'26$ direct -2319 Apr 13 j 03:59 16°534'50 min. Earth dist. -2311 Mar 06 j 22:54 26°Ω49'33 17.45895 AU direct -2311 May 22 j 13:57 24° Ω 45'46 -2319 Aug 03 j 20:44 21°508'11 0°39'33 conjunction -2319 Aug 03 j 20:44 21°508'11 -2311 Sep 11 j 04:27 29° Ω 14'09 0°45'58 minimum elong 0°39'36 conjunction -2319 Aug 02 j 19:17 21°504'09 -2311 Sep 11 j 04:27 29° Ω 14'09 max. Earth dist. 19.26430 AU minimum elong 0°46'00 retrograde -2319 Nov 19 j 06:19 25°531'35 max. Earth dist. -2311 Sep 10 j 15:09 $29^{\circ}\Omega$ 12'04 19.48050 AU opposition -2318 Jan 31 j 15:49 23°529'24 0°45'10 -2311 Sep 23 j 08:31 0° M min. Earth dist. -2318 Feb 01 j 13:53 23°527'00 17.26799 AU retrograde -2311 Dec 27 j 02:16 3° m 33'40 direct -2318 Apr 18 j 08:14 21°522'38 opposition -2310 Mar 11 j 11:44 1° Mp 32'36 0°50'55 min. Earth dist. -2310 Mar 11 j 22:05 1° Mp 31'30 17.50329 AU -2318 Aug 08 j 23:45 25°55'53 0°41'25 -2310 Apr 21 j 12:28 30°RΩ conjunction

•	nical year style is used: The		_	\ //		, .	age /
direct	-2310 May 27 j 18:34		in astronomical co	min. Earth dist.	-2302 Apr 18 j 03:38		17.98800 AU
direct	-2310 Jul 02 j 01:26	0°m		direct	-2302 Apr 18 j 05:38	5° £ 57'00	17.98800 AC
	2510 Jul 02 j 01.20	لپا ∨		uncet	2502 341 04 3 10.10	3 = 37 00	
conjunction	-2310 Sep 16 j 02:03	3° m 54'49	0°45'22	conjunction	-2302 Oct 21 j 19:15	10° £ 12'01	0°31'10
minimum elong	-2310 Sep 16 j 02:03	3° m 54'49	0°45'23	minimum elong	-2302 Oct 21 j 19:15		0°31'09
max. Earth dist.	-2310 Sep 15 j 15:35		19.52670 AU	max. Earth dist.	-2302 Oct 22 j 03:20		
retrograde	-2310 Dec 31 j 22:24	8° m) 13'33		retrograde	-2301 Feb 06 j 04:49		
opposition	-2309 Mar 16 j 13:35	6° m) 12'33	0°50'04	opposition	-2301 Apr 23 j 07:26		0°33'07
min. Earth dist.	-2309 Mar 16 j 23:01		17.55131 AU	min. Earth dist.	-2301 Apr 22 j 22:52		18.05958 AU
direct	-2309 Jun 01 j 20:03	4° m 07'53		direct	-2301 Jul 09 j 12:56	10° ≏ 22'27	
	·	•			•		
conjunction	-2309 Sep 20 j 22:22	8° m 33'40	0°44'28	conjunction	-2301 Oct 26 j 08:22	14° ≏ 35'50	0°28'27
minimum elong	-2309 Sep 20 j 22:22	8° m 33'41	0°44'30	minimum elong	-2301 Oct 26 j 08:22	14° ≏ 35'50	0°28'26
max. Earth dist.	-2309 Sep 20 j 13:13	8° m 32'14	19.57670 AU	max. Earth dist.	-2301 Oct 26 j 17:26	14° ≏ 37'13	20.09564 AU
retrograde	-2308 Jan 05 j 20:15	12° m 51'36		retrograde	-2300 Feb 10 j 20:47	18° ≏ 46'57	
opposition	-2308 Mar 20 j 14:46	10° m 50'38	0°48'54	opposition	-2300 Apr 27 j 03:54	16° ≏ 47'03	0°30'00
min. Earth dist.	-2308 Mar 20 j 21:09	10° m 49'58	17.60315 AU	min. Earth dist.	-2300 Apr 26 j 17:39	16° ≏ 48'05	18.13138 AU
direct	-2308 Jun 05 j 22:45	8°M/46'15		direct	-2300 Jul 13 j 08:02	14° ≏ 46'02	
conjunction	-2308 Sep 24 j 17:58	13° m 10'37	0°43'17	conjunction	-2300 Oct 29 j 20:56	18° ≏ 57'50	0°25'35
minimum elong	-2308 Sep 24 j 17:58	13° m 10'37	0°43'17	minimum elong	-2300 Oct 29 j 20:57	18° ≏ 57'50	0°25'33
max. Earth dist.	-2308 Sep 24 j 12:07	13° m 09'42	19.63044 AU	max. Earth dist.	-2300 Oct 30 j 08:39	18° ≏ 59'37	20.16714 AU
retrograde	-2307 Jan 09 j 15:05	17° m 27'40		retrograde	-2299 Feb 14 j 12:19	23° ≏ 08'06	
opposition	-2307 Mar 25 j 15:24	15° m 26'47	0°47'25	opposition	-2299 May 01 j 23:28	21° ≏ 08'21	0°26'44
min. Earth dist.	-2307 Mar 25 j 20:29	15° m 26'15	17.65880 AU	min. Earth dist.	-2299 May 01 j 11:20	21° ≏ 09'35	18.20240 AU
direct	-2307 Jun 10 j 22:39	13°M)22'42		direct	-2299 Jul 18 j 03:28	19° ≏ 07'47	
conjunction	-2307 Sep 29 j 12:26	17° m 45'35	0°41'50	conjunction	-2299 Nov 03 j 08:37		
minimum elong	-2307 Sep 29 j 12:26	17° m) 45'35	0°41'51	minimum elong	-2299 Nov 03 j 08:37		
max. Earth dist.	-2307 Sep 29 j 07:55	17° m 44'53	19.68813 AU	max. Earth dist.	-2299 Nov 03 j 21:08		20.23762 AU
retrograde	-2306 Jan 14 j 11:59	22° m 01'46		retrograde	-2298 Feb 19 j 02:12		
opposition	-2306 Mar 30 j 15:32	-	0°45'39	opposition	-2298 May 06 j 18:33		0°23'21
min. Earth dist.	-2306 Mar 30 j 17:31	-•	17.71844 AU	min. Earth dist.	-2298 May 06 j 05:12		18.27231 AU
direct	-2306 Jun 15 j 23:35	17° m 57'15		direct	-2298 Jul 22 j 20:30	23° ≏ 27'38	
						_	
conjunction	-2306 Oct 04 j 06:01	22° m 18'36	0°40'09	conjunction	-2298 Nov 07 j 19:33		0°19'30
minimum elong	-2306 Oct 04 j 06:01	22° Mp 18'36	0°40'09	minimum elong	-2298 Nov 07 j 19:33		
max. Earth dist.	-2306 Oct 04 j 05:04	~	19.74966 AU	max. Earth dist.	-2298 Nov 08 j 10:27		20.30672 AU
retrograde	-2305 Jan 19 j 06:01	26° m 33'55			-2298 Dec 20 j 00:43	0°M	
opposition	-2305 Apr 04 j 15:15	24° m 33'14		retrograde	-2297 Feb 23 j 16:35	1°M44'54	
min. Earth dist.	-2305 Apr 04 j 15:28		17.78170 AU		-2297 May 05 j 11:58	30° R≏	
direct	-2305 Jun 20 j 22:24	22° m 29'56		opposition	-2297 May 11 j 12:45	29° £ 45′20	0°19'51
. ,.	2205 0 + 00:22 24	0.60m 40140	0020112	min. Earth dist.	-2297 May 10 j 21:23		18.34047 AU
conjunction	-2305 Oct 08 j 22:34	26° m/49'42	0°38'13	direct	-2297 Jul 27 j 14:30		
minimum elong	-2305 Oct 08 j 22:35	26° Mp 49'42	0°38'13		-2297 Oct 10 j 21:01	0° M ₊	
max. Earth dist.	-2305 Oct 08 j 22:57	-•	19.81471 AU	. ,.	2207 N 12 : 05 42	10 M 52127	0017110
natna a J-	-2305 Dec 05 j 12:10	0∘ ⊽		conjunction	-2297 Nov 12 j 05:42	1°M.52'37	0°16'19
retrograde	-2304 Jan 24 j 01:27	1° £ 04'10		minimum elong max. Earth dist.	-2297 Nov 12 j 05:42 -2297 Nov 12 j 21:23	1°M52'37	0°16'18 20.37398 AU
***	-2304 Mar 16 j 01:28	30°RM)	0041120		,		20.37398 AU
opposition	-2304 Apr 08 j 14:07	29° My 03'37	0°41'20	retrograde	-2296 Feb 28 j 04:38	6°M00'27	0°16'16
min. Earth dist.	-2304 Apr 08 j 11:34		17.84831 AU	opposition	-2296 May 15 j 06:02	4°M00'56	
direct	-2304 Jun 24 j 21:25	27° ™ 00'44 0° ≏		min. Earth dist.	-2296 May 14 j 13:52		18.40693 AU
	-2304 Sep 20 j 23:23	0 ==		direct	-2296 Jul 31 j 05:18	2°M01'28	
conjunction	-2304 Oct 12 j 14:23	1° ≏ 18'57	0°36'04	conjunction	-2296 Nov 15 j 15:08	6° M L07'02	0°13'05
minimum elong	-2304 Oct 12 j 14:23	1° ⊆ 18'57	0°36'04	minimum elong	-2296 Nov 15 j 15:08	6°ML07'02	0°13'02
C			19.88265 AU	_		6°M06'26	0 13 02
max. Earth dist.	-2304 Oct 12 j 18:10	5° £ 32'34	19.00203 AU	behind sun begin behind sun end	-2296 Nov 15 j 11:06	6°11L0626	
retrograde	-2303 Jan 27 j 18:35	3° £ 32'34	0°38'48	max. Earth dist.	-2296 Nov 15 j 19:11		20.43954 AU
onnogition		11 <i>ک</i> دے د			-2296 Nov 16 j 08:58	6°11L09'42 10°11L14'04	20.43934 AU
opposition	-2303 Apr 13 j 12:31	20 0 22120	17 ()1774 411				
min. Earth dist.	-2303 Apr 13 j 08:08	3° <u>•</u> 32'38	17.91726 AU	retrograde	-2295 Mar 03 j 17:28		0012120
		3° £ 32'38 1° £ 29'47	17.91726 AU	opposition	-2295 May 19 j 22:29	8°ML14'35	
min. Earth dist. direct	-2303 Apr 13 j 08:08 -2303 Jun 29 j 19:11	1° £ 29'47		opposition min. Earth dist.	-2295 May 19 j 22:29 -2295 May 19 j 04:08	8°M14'35 8°M16'27	0°12'38 18.47156 AU
min. Earth dist. direct	-2303 Apr 13 j 08:08 -2303 Jun 29 j 19:11 -2303 Oct 17 j 05:07	1° £ 29'47 5° £ 46'23	0°33'42	opposition	-2295 May 19 j 22:29	8°ML14'35	
min. Earth dist. direct conjunction minimum elong	-2303 Apr 13 j 08:08 -2303 Jun 29 j 19:11 -2303 Oct 17 j 05:07 -2303 Oct 17 j 05:07	1° £ 29'47 5° £ 46'23 5° £ 46'23	0°33'42 0°33'41	opposition min. Earth dist. direct	-2295 May 19 j 22:29 -2295 May 19 j 04:08 -2295 Aug 04 j 21:00	8°M14'35 8°M16'27 6°M15'27	18.47156 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2303 Apr 13 j 08:08 -2303 Jun 29 j 19:11 -2303 Oct 17 j 05:07 -2303 Oct 17 j 05:07 -2303 Oct 17 j 10:04	1° Ω 29'47 5° Ω 46'23 5° Ω 46'23 5° Ω 47'08	0°33'42	opposition min. Earth dist. direct conjunction	-2295 May 19 j 22:29 -2295 May 19 j 04:08 -2295 Aug 04 j 21:00 -2295 Nov 19 j 23:35	8°M14'35 8°M16'27 6°M15'27 10°M19'30	18.47156 AU 0°09'48
min. Earth dist. direct conjunction minimum elong	-2303 Apr 13 j 08:08 -2303 Jun 29 j 19:11 -2303 Oct 17 j 05:07 -2303 Oct 17 j 05:07	1° £ 29'47 5° £ 46'23 5° £ 46'23	0°33'42 0°33'41	opposition min. Earth dist. direct	-2295 May 19 j 22:29 -2295 May 19 j 04:08 -2295 Aug 04 j 21:00	8°M14'35 8°M16'27 6°M15'27	18.47156 AU

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2295 in astronomical counting style is the year 2296 BCE in historical counting style. behind sun end -2295 Nov 20 i 04:59 10°M20'17 behind sun end -2289 Dec 14 i 20:57 5°**х** 01'27 5°**尽**04'34 20.85182 AU max. Earth dist. -2295 Nov 20 j 18:26 10°ML22'19 20.50333 AU max. Earth dist. -2289 Dec 15 j 18:09 -2294 Mar 08 j 04:20 14° ML 25' 48 -2288 Apr 01 j 18:55 9°**х** 03′30 retrograde retrograde -2294 May 24 j 14:18 12°**M**26'21 -2288 Jun 18 j 20:47 0°08'57 7°**∡**104'29 0°-12'-51 opposition opposition -2294 May 23 j 19:11 12°**M**-28'16 18.53477 AU -2288 Jun 17 j 19:09 min. Earth dist. min. Earth dist. 7°**≯**07'03 18.87694 AU -2294 Aug 09 j 10:03 -2288 Sep 03 j 01:51 direct 10°M27'30 direct 5°**х** 07′32 -2294 Nov 24 j 07:36 14°M30'09 -2288 Dec 17 j 21:09 9°**х** 03'17 0°-13'-12 conjunction 0°06'30 conjunction -2294 Nov 24 j 07:36 14°M30'09 -2288 Dec 17 j 21:09 minimum elong 0°06'27 minimum elong 9°**х** 03′17 0°13'16 behind sun begin -2294 Nov 24 j 01:27 14°M29'15 behind sun begin -2288 Dec 17 j 17:15 9°×702'44 behind sun end -2294 Nov 24 j 13:45 14°M31'02 behind sun end -2288 Dec 18 j 01:03 9°**х**¹03′50 max. Earth dist. -2294 Nov 25 j 04:33 14°M 33'15 20.56584 AU max. Earth dist. -2288 Dec 19 j 00:35 9°**₰**07'17 20.90061 AU -2294 Dec 02 j 16:42 15°M retrograde -2287 Apr 06 j 05:40 13°**х** 05′40 retrograde -2293 Mar 12 j 16:12 18°M 35'43 min. Earth dist. -2287 Jun 22 j 04:35 11°**✗**09'26 18.92368 AU min. Earth dist. -2293 May 28 j 07:37 16°M38'28 18.59660 AU opposition -2287 Jun 23 j 07:38 11°**₹**06'44 0°-16'-19 opposition -2293 May 29 j 05:05 16°M36'18 0°05'16 direct -2287 Sep 07 j 11:45 9°**х¹**10′03 -2293 Jul 14 j 17:07 15°RML direct -2293 Aug 13 j 23:25 14°M 37'46 conjunction -2287 Dec 22 j 02:15 13° ₹ 04'56 0°-16'-17 -2293 Sep 12 j 11:27 15°M minimum elong -2287 Dec 22 j 02:14 13° ₹ 04'56 0°16'22 max. Earth dist. -2287 Dec 23 j 05:50 13° ₹08'56 20.94506 AU conjunction -2293 Nov 28 j 14:52 18°M39'04 retrograde -2286 Apr 10 j 13:50 17° ₹ 06'58 minimum elong -2293 Nov 28 j 14:52 18°M 39'04 0°03'08 opposition -2286 Jun 27 j 18:12 15° ₹ 08'05 0°-19'-41 behind sun begin -2293 Nov 28 j 08:22 18°M 38'08 min. Earth dist. -2286 Jun 26 i 16:00 15° 710'42 18.96590 AU behind sun end -2293 Nov 28 j 21:23 18°ML40'00 direct -2286 Sep 11 j 18:19 13° ₹ 11'38 max. Earth dist. -2293 Nov 29 i 12:47 18° ML42'18 20.62690 AU -2292 Mar 16 j 02:20 22° 11.43'59 -2286 Dec 26 j 07:27 17° **₹** 05'44 0°-19'-17 retrograde conjunction opposition -2292 Jun 01 j 19:15 20°ML44'37 -2286 Dec 26 j 07:26 17° ₹ 05'44 0°01'35 minimum elong 0°19'21 -2292 May 31 j 21:17 20°M 46'49 -2286 Dec 27 j 11:28 17° ₹09'47 20.98481 AU min. Earth dist. 18.65704 AU max. Earth dist. -2292 Aug 17 j 10:24 18°M46'24 -2285 Apr 14 j 23:32 21°**又** 07′26 direct retrograde -2285 Jul 01 j 00:42 19° ₹11'18 19.00305 AU -2292 Nov 07 j 13:26 21°M21'59 desc. node min. Earth dist. -2285 Jul 02 j 03:54 19° ₹ 08'35 0°-22'-57 opposition -2292 Dec 01 j 21:41 22°ML46'26 0°00'-13 -2285 Sep 16 j 03:25 17° ₹ 12'19 conjunction direct -2292 Dec 01 j 21:43 22°M 46'26 0°00'16 minimum elong -2292 Dec 01 j 15:14 22°M45'30 -2285 Dec 30 j 12:24 21° ₹ 05'42 0°-22'-11 behind sun begin conjunction -2292 Dec 02 j 04:11 22°M47'21 -2285 Dec 30 j 12:24 21°**尽**05'42 0°22'15 behind sun end minimum elong -2292 Dec 02 j 21:24 22°ML49'55 20.68651 AU -2285 Dec 31 j 16:06 21° ₹ 09'42 21.01916 AU max. Earth dist. max. Earth dist. -2284 Apr 18 j 07:25 25° ₹ 07'08 retrograde -2291 Mar 20 j 13:41 26°M 50'44 retrograde min. Earth dist. -2291 Jun 05 j 08:20 24°ML53'52 18.71571 AU min. Earth dist. -2284 Jul 04 j 11:20 23° ₹ 10'52 19.03473 AU opposition -2291 Jun 06 j 08:29 24°M 51'27 0°-2'-5 opposition -2284 Jul 05 j 13:21 23° ₹ 08'16 0°-26'-5 direct -2291 Aug 21 j 22:17 22°M53'34 direct -2284 Sep 19 j 09:13 21°**尽** 12'08 -2291 Dec 06 j 04:03 26°ML52'24 0°-3'-35 -2283 Jan 02 j 17:12 25° ₹04'53 0°-24'-58 conjunction conjunction -2291 Dec 06 j 04:02 26°M 52'24 -2283 Jan 02 j 17:12 25° **₹**04'53 0°25'03 minimum elong 0°03'39 minimum elong -2291 Dec 05 j 21:34 26°M51'28 max. Earth dist. -2283 Jan 03 j 21:00 25° ₹ 08'53 21.04814 AU behind sun begin -2291 Dec 06 j 10:31 26°M53'19 -2283 Apr 22 j 16:12 29° ₹06'04 behind sun end retrograde -2283 Jul 09 j 22:05 27° ₹07'09 0°-29'-5 max. Earth dist. -2291 Dec 07 i 04:33 26°M 56'00 20.74414 AU opposition -2290 Feb 04 i 20:19 0°×7 min. Earth dist. -2283 Jul 08 j 19:14 27° ₹ 09'50 19.06097 AU retrograde -2290 Mar 24 j 23:05 0°**х** 56′09 direct -2283 Sep 23 j 17:09 25° ₹ 11'06 -2290 May 14 i 05:14 30°RML -2290 Jun 10 i 21:20 28°M 56'57 0°-5'-43 -2282 Jan 06 j 21:51 29° **₹**'03'17 0°-27'-37 opposition conjunction min. Earth dist. -2290 Jun 09 j 21:04 28° ML 59'23 18.77234 AU -2282 Jan 06 i 21:51 29° ₹03'17 0°27'41 minimum elong direct -2290 Aug 26 j 07:27 26° 1 59'24 max. Earth dist. -2282 Jan 08 j 01:19 29° ₹07'14 21.07174 AU -2290 Nov 24 j 00:34 -2282 Jan 23 j 12:18 0°궁 0°×7 retrograde -2282 Apr 26 j 23:26 3°る04'17 conjunction -2290 Dec 10 j 09:59 0°**₹**57'07 0°-6'-50 min. Earth dist. -2282 Jul 13 j 04:54 1°る07'52 19.08215 AU minimum elong -2290 Dec 10 j 09:59 0°**х** 57′07 0°06'54 opposition -2282 Jul 14 j 06:30 1°る05'18 0°-31'-56 behind sun begin -2290 Dec 10 j 03:53 0°**∡** 56'15 -2282 Aug 12 j 05:15 30°R*X* 0°**∡**¹57'59 -2290 Dec 10 j 16:04 -2282 Sep 27 j 22:31 29°**∡**09'18 behind sun end direct 1°**х** 00'55 20.79953 AU -2282 Nov 11 j 23:47 0°궁 max. Earth dist. -2290 Dec 11 j 11:59 5°**₹**00'21 retrograde -2289 Mar 29 j 10:28 -2281 Jan 11 j 02:27 3°**ප**01'01 min. Earth dist. -2289 Jun 14 j 07:14 3°**✗**03'52 18.82627 AU conjunction 0°-30'-7 opposition -2289 Jun 15 j 09:21 3°**∡**01'15 0°-9'-19 minimum elong -2281 Jan 11 j 02:27 3°**ප**01'01 0°30'12 direct -2289 Aug 30 j 18:13 1°**×**04'01 max. Earth dist. -2281 Jan 12 j 06:02 3°る04'58 21.09059 AU retrograde -2281 May 01 j 08:07 7°**る**01'52 conjunction -2289 Dec 14 j 15:40 5°**х** 00'42 0°-10'-3 min. Earth dist. -2281 Jul 17 j 11:52 5°る05'26 19.09868 AU -2289 Dec 14 j 15:40 5°**х** 00′42 0°10'07 -2281 Jul 18 j 14:15 5°**る**02'48 0°-34'-37 minimum elong opposition

-2289 Dec 14 j 10:22

behind sun begin

4°**х** 59'57

-2281 Oct 02 j 04:55

direct

3°る06'49

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2280 in astronomical counting style is the year 2281 BCE in historical counting style. 6°පි58'10 0°-32'-28 -2280 Jan 15 i 07:02 conjunction -2272 Feb 16 i 03:33 8°**≈**35'49 0°-45'00 conjunction minimum elong minimum elong -2280 Jan 15 i 07:02 6°る58'10 0°32'32 -2272 Feb 16 j 03:33 8°≈35'49 0°45'03 7°る02'03 21.10482 AU 8°≈38'49 21.06796 AU max. Earth dist. -2280 Jan 16 j 10:13 max. Earth dist. -2272 Feb 17 j 00:41 -2280 May 04 j 14:29 10°る58'56 -2272 Jun 06 j 06:45 12°≈38'18 retrograde retrograde -2280 Jul 21 j 21:35 8°る59'49 0°-37'-7 -2272 Aug 22 j 06:56 10°≈40'37 19.05557 AU opposition min. Earth dist. -2280 Jul 20 j 20:32 -2272 Aug 23 j 00:53 0°-50'-7 min. Earth dist. 9°る02'19 19.11089 AU opposition 10°≈38'48 -2280 Oct 05 j 09:48 -2272 Nov 05 j 21:24 direct 7°**る**03'51 direct 8°≈42'31 -2271 Feb 19 j 11:09 12°≈35'10 0°-45'-39 conjunction -2279 Jan 18 j 11:41 10°₹54'56 0°-34'-40 conjunction -2271 Feb 19 j 11:09 12°≈35'10 0°45'43 minimum elong -2279 Jan 18 j 11:41 10°**る**54'56 0°34'44 minimum elong -2271 Feb 20 j 06:41 12°≈37'57 21.04104 AU max. Earth dist. -2279 Jan 19 j 14:52 10°중58'49 21.11507 AU max. Earth dist. -2279 May 08 j 23:33 14°**⋜**55'42 -2271 Apr 05 j 20:06 retrograde 15°**≈** -2279 Jul 25 j 02:46 12°る59'05 19.11915 AU -2271 Jun 10 j 16:35 min. Earth dist. retrograde 16°≈38′05 opposition -2279 Jul 26 j 04:33 12°₹56'30 0°-39'-27 -2271 Aug 18 j 10:03 15°R≈ direct -2279 Oct 09 j 15:14 11°**⋜**00'33 opposition -2271 Aug 27 j 07:08 14°**≈**38′28 0°-50'-44 min. Earth dist. -2271 Aug 26 j 13:50 14°≈40'13 19.02573 AU conjunction -2278 Jan 22 j 16:17 14°**⋜**51'29 0°-36'-42 direct -2271 Nov 10 j 03:11 12°≈41'58 minimum elong -2278 Jan 22 j 16:17 14°**ਰ**51'29 0°36'46 -2270 Jan 26 j 04:27 15°≈ max. Earth dist. -2278 Jan 23 j 19:02 14°る55'18 21.12128 AU retrograde -2278 May 13 j 05:42 18°る52'19 conjunction -2270 Feb 23 j 19:11 16°≈35'12 0°-46'-6 min. Earth dist. -2278 Jul 29 j 11:04 16°る55'31 19.12344 AU minimum elong -2270 Feb 23 j 19:11 16°≈35'12 0°46'09 opposition -2278 Jul 30 i 11:25 16° ₹53'04 0°-41'-36 max. Earth dist. -2270 Feb 24 i 12:55 16°≈37'44 21.00836 AU direct -2278 Oct 13 j 19:14 14°る57'07 retrograde -2270 Jun 15 j 00:45 20°≈38'35 opposition -2270 Aug 31 j 13:34 18°≈38'48 0°-51'-6 conjunction -2277 Jan 26 j 21:18 18°₹48'00 0°-38'-33 min. Earth dist. -2270 Aug 30 j 22:44 18°≈40'18 18.99029 AU -2277 Jan 26 j 21:18 18°る48'00 0°38'36 direct -2270 Nov 14 j 07:26 16°≈42'04 minimum elong max. Earth dist. -2277 Jan 27 j 23:47 18° ₹ 51'46 21.12366 AU retrograde -2277 May 17 j 15:06 22° ₹ 48'57 -2269 Feb 28 i 03:53 20°≈35'56 0°-46'-19 conjunction -2277 Aug 03 j 17:43 20°₹49'40 0°-43'-33 -2269 Feb 28 i 03:53 20°≈35'56 opposition minimum elong 0°46'22 -2269 Feb 28 j 19:50 20°≈38'13 20.97050 AU min. Earth dist. -2277 Aug 02 j 17:01 20°궁52'09 19.12375 AU max. Earth dist. -2277 Oct 18 j 00:31 18°₹53'43 -2269 Jun 19 j 10:51 24°≈39'48 direct retrograde -2269 Sep 04 j 19:46 22°≈39'50 0°-51'-13 opposition -2269 Sep 04 j 05:45 22°≈41'16 18.94993 AU -2276 Jan 31 j 02:31 22°₹44'40 0°-40'-14 conjunction min. Earth dist. -2276 Jan 31 j 02:31 22°₹344'40 0°40'18 -2269 Nov 18 j 13:39 20°≈42'48 minimum elong direct -2276 Feb 01 j 04:11 22°る48'19 21.12184 AU max. Earth dist. -2268 Mar 03 j 13:03 24°≈37'25 0°-46'-18 -2276 May 20 j 21:15 26°る45'49 retrograde conjunction -2276 Aug 06 j 01:11 24°정48'49 19.11982 AU -2268 Mar 03 j 13:03 24°≈37'25 0°46'20 min. Earth dist. minimum elong opposition -2276 Aug 07 j 00:08 24°₹46'31 0°-45'-18 max. Earth dist. -2268 Mar 04 j 03:20 24°≈39'27 20.92787 AU direct -2276 Oct 21 j 03:32 22°₹50'33 retrograde -2268 Jun 22 j 19:25 28°≈41'48 opposition -2268 Sep 08 j 02:19 26°≈41'38 0°-51'-5 conjunction -2275 Feb 03 j 07:58 26°₹41'39 0°-41'-43 min. Earth dist. -2268 Sep 07 j 14:39 26°≈42'50 18.90523 AU minimum elong -2275 Feb 03 j 07:58 26°₹41'39 0°41'47 direct -2268 Nov 21 j 18:14 24°≈44'18 max. Earth dist. -2275 Feb 04 j 09:04 26° ₹ 45'13 21.11580 AU -2275 Apr 12 j 10:39 -2267 Mar 07 j 22:38 28°≈39'44 0°-46'-3 0°**≈** conjunction -2275 May 25 j 06:51 0°≈43'04 -2267 Mar 07 j 22:38 28°≈39'44 0°46'06 retrograde minimum elong -2275 Jul 07 j 22:41 30°Rる -2267 Mar 08 j 11:16 28°≈41'32 20.88141 AU max. Earth dist. min. Earth dist. -2275 Aug 10 j 07:21 28°る46'03 19.11145 AU -2267 Mar 31 i 18:13 0°**∀** -2275 Aug 11 i 06:20 28°₹43'44 0°-46'-50 2°**)** 44'43 opposition retrograde -2267 Jun 27 i 06:28 -2275 Oct 25 j 09:07 26°る47'45 0°\(\frac{1}{44}\)'20 0°-50'-41 direct opposition -2267 Sep 12 j 08:56 -2274 Jan 27 j 01:58 min. Earth dist. -2267 Sep 11 i 22:00 0°¥45'28 18.85699 AU 0°≈≈ -2267 Sep 30 j 17:58 30°R≈ -2274 Feb 07 j 13:56 0°≈39'06 0°-43'-1 direct -2267 Nov 26 j 00:57 28°≈46'40 conjunction -2274 Feb 07 j 13:56 0°≈39'06 0°43'05 -2266 Jan 19 j 08:40 0°₩ minimum elong 0°≈42'31 21.10502 AU max. Earth dist. -2274 Feb 08 j 13:54 -2266 Mar 12 j 09:03 2°\(\pm\)43'01 0°-45'-34 retrograde -2274 May 29 j 13:29 4°≈40'50 conjunction opposition -2274 Aug 15 j 12:32 2°**≈**41'28 0°-48'-10 minimum elong -2266 Mar 12 j 09:03 2°**)**(43'01 0°45'36 2°≈43'34 19.09823 AU 2°\ 44'36 20.83151 AU min. Earth dist. -2274 Aug 14 j 15:43 max. Earth dist. -2266 Mar 12 j 20:09 -2274 Oct 29 j 12:08 0°≈45'26 retrograde -2266 Jul 01 j 15:49 6°**)**48′38 direct -2266 Sep 16 j 15:47 4°\(\pm\)48'05 0°-50'-3 opposition -2273 Feb 11 j 20:32 4°≈37'08 0°-44'-7 min. Earth dist. -2266 Sep 16 j 07:08 4°**¥**48'59 18.80563 AU conjunction -2273 Feb 11 j 20:32 direct -2266 Nov 30 j 06:13 2°**¥**50′06 minimum elong 4°≈37'08 0°44'10 max. Earth dist. -2273 Feb 12 j 19:19 4°≈40'23 21.08931 AU retrograde -2273 Jun 02 j 23:21 8°≈39'13 conjunction -2265 Mar 16 j 20:12 6°**)**47'27 0°-44'-52 opposition -2273 Aug 19 j 18:40 6°**≈**39'48 0°-49'-15 minimum elong -2265 Mar 16 j 20:12 6°**)**(47'27 0°44'54 min. Earth dist. -2273 Aug 18 j 22:17 6°≈41'52 19.07976 AU max. Earth dist. -2265 Mar 17 j 05:21 6°**¥**48'45 20.77893 AU direct -2273 Nov 02 j 17:45 4°≈43'40 -2265 Jul 06 j 03:53 10°**)** 53′45 retrograde -2265 Sep 20 j 22:53 8°**¥**53'02 0°-49'-9 opposition

•	omena of Uranus fr		•				age 10
Attention, astronom	ical year style is used: The	-		unting style is the year			
min. Earth dist.	-2265 Sep 20 j 15:05		18.75174 AU	min. Earth dist.	-2257 Oct 24 j 08:34		18.24371 AU
direct	-2265 Dec 04 j 13:24	6° ¥ 54'43		direct	-2256 Jan 06 j 14:46	10°'Y'32'20	
	22(1)(20:07.77	1001/50110	00 101 56		2256 1 24:14.56	1.4000.4010.5	00 001 04
conjunction	-2264 Mar 20 j 07:57 -2264 Mar 20 j 07:57			conjunction	-2256 Apr 24 j 14:56		
minimum elong max. Earth dist.	-2264 Mar 20 j 07:37			minimum elong max. Earth dist.	-2256 Apr 24 j 14:56 -2256 Apr 24 j 05:19		0°28'23
retrograde	-2264 Mar 20 j 15:39 -2264 Jul 09 j 14:28		20.72378 AU	retrograde	-2256 Apr 24 J 05:19 -2256 Aug 13 j 11:13		20.20700 AU
opposition	-2264 Sep 24 j 06:27		0°-48'00	opposition	-2256 Oct 27 j 13:29		0°-29'-56
min. Earth dist.	-2264 Sep 24 j 00:49			min. Earth dist.	-2256 Oct 27 j 22:37		
direct	-2264 Dec 07 j 19:39		10.07331710	direct	-2255 Jan 10 j 02:49		10.17111110
	220 1 200 07 y 13.33	11 /(00 11		4.1.001	2200 0411 10 1 02.19	1. 102.0	
conjunction	-2263 Mar 24 j 20:33	15°) €00'23	0°-42'-46	conjunction	-2255 Apr 29 j 10:48	19° Ƴ 04'10	0°-25'-32
minimum elong	-2263 Mar 24 j 20:33			minimum elong	-2255 Apr 29 j 10:48		0°25'33
max. Earth dist.	-2263 Mar 25 j 02:07			max. Earth dist.	-2255 Apr 28 j 21:57		20.13480 AU
retrograde	-2263 Jul 14 j 03:34	19° ₩ 08'13		retrograde	-2255 Aug 18 j 04:38	23° Υ 19'00	
opposition	-2263 Sep 28 j 14:18	17°) €07'14	0°-46'-36	opposition	-2255 Nov 01 j 02:02	21° Υ 17'01	0°-26'-40
min. Earth dist.	-2263 Sep 28 j 09:39	17°) €07'43	18.63744 AU	min. Earth dist.	-2255 Nov 01 j 12:59	21° Υ 15'51	18.09811 AU
direct	-2263 Dec 12 j 03:28	15° ₩ 08'19		direct	-2254 Jan 14 j 17:51	19° Ƴ 15′04	
conjunction	-2262 Mar 29 j 10:04			conjunction	-2254 May 04 j 07:43		0°-22'-30
minimum elong	-2262 Mar 29 j 10:04			minimum elong	-2254 May 04 j 07:43		0°22'30
max. Earth dist.	-2262 Mar 29 j 14:09		20.60762 AU	max. Earth dist.	-2254 May 03 j 17:52		20.06173 AU
retrograde	-2262 Jul 18 j 15:54			retrograde	-2254 Aug 22 j 21:03		
opposition	-2262 Oct 02 j 22:46			opposition	-2254 Nov 05 j 15:23		
min. Earth dist.	-2262 Oct 02 j 20:24		18.57730 AU	min. Earth dist.	-2254 Nov 06 j 03:55		18.02521 AU
direct	-2262 Dec 16 j 10:52	19° ∺ 17'37		direct	-2253 Jan 19 j 08:19	23° 'Y' 39'07	
	22(1 4 02:00.21	2201/10154	00 201 45		2252.14 00:05.11	2700052140	00 101 20
conjunction	-2261 Apr 03 j 00:31			conjunction	-2253 May 09 j 05:11	27° Y 53'40 27° Y 53'40	0°-19'-20 0°19'19
minimum elong max. Earth dist.	-2261 Apr 03 j 00:31 -2261 Apr 03 j 02:01			minimum elong max. Earth dist.	-2253 May 09 j 05:11 -2253 May 08 j 12:17		19.98927 AU
retrograde	-2261 Apr 03 j 02:01 -2261 Jul 23 j 06:22		20.34001 AU	max. Earm dist.	-2253 Jun 14 j 22:02	0° 8	19.98927 AU
opposition	-2261 Jul 23 j 00:22 -2261 Oct 07 j 07:34		0°-43'-2	retrograde	-2253 Juli 14 j 22:02 -2253 Aug 27 j 14:56	2° 8 10'10	
min. Earth dist.	-2261 Oct 07 j 06:33			opposition	-2253 Nov 10 j 05:22		0°-19'-38
direct	-2261 Dec 20 j 19:55		10.51521710	min. Earth dist.	-2253 Nov 10 j 19:37		17.95345 AU
direct	2201 Bec 20 j 17.55	23 /(2040		mm. Lartii dist.	-2253 Nov 13 j 06:09	30°RY	17.75545 110
conjunction	-2260 Apr 06 j 15:57	27° ₩ 32'28	0°-37'-55	direct	-2252 Jan 24 j 00:44	28° Υ 04'58	
minimum elong	-2260 Apr 06 j 15:57				-2252 Apr 01 j 18:15	0°8	
max. Earth dist.	-2260 Apr 06 j 15:49			max. Earth dist.	-2252 May 12 j 10:10	2° 8 18'32	19.91823 AU
	-2260 May 21 j 16:19	0° Υ			, ,		
retrograde	-2260 Jul 26 j 20:08	1° Y 42'54		conjunction	-2252 May 13 j 03:36	2° 8 21'08	0°-16'-1
	-2260 Oct 03 j 10:40	30° ₹ ₩		minimum elong	-2252 May 13 j 03:36	2° 8 21'08	0°16'01
opposition	-2260 Oct 10 j 17:08	29°) 41'41	0°-40'-53	retrograde	-2252 Aug 31 j 09:07	6° 8 38'26	
min. Earth dist.	-2260 Oct 10 j 18:29		18.45081 AU	opposition	-2252 Nov 13 j 20:07	4° 8 35'59	
direct	-2260 Dec 24 j 04:33	27°) 41′50		min. Earth dist.	-2252 Nov 14 j 11:25		17.88341 AU
	-2259 Mar 10 j 19:43	0° Y		direct	-2251 Jan 27 j 17:29	2° 8 32'41	
				max. Earth dist.	-2251 May 17 j 06:23	6° 8 47'24	19.84936 AU
conjunction	-2259 Apr 11 j 08:09	1° Y 47'00			005135 10:00:0	cot 1 =	00.101.25
minimum elong	-2259 Apr 11 j 08:09	1° Υ 47'00		conjunction	-2251 May 18 j 02:35	6° 8 50'26	0°-12'-36
max. Earth dist.	-2259 Apr 11 j 05:00		20.41787 AU	minimum elong	-2251 May 18 j 02:34	6° 8 50'26	0°12'34
retrograde	-2259 Jul 31 j 12:03	5° Υ 58'21	09 291 20	behind sun begin	-2251 May 17 j 22:21	6° 8 49'49 6° 8 51'03	
opposition min. Earth dist.	-2259 Oct 15 j 03:18	3°Y57'01	0°-38'-29 18.38408 AU	behind sun end	-2251 May 18 j 06:48	11° 8 08'34	
direct	-2259 Oct 15 j 06:17 -2259 Dec 28 j 15:27	1° Υ 56'48	16.36406 AU	retrograde opposition	-2251 Sep 05 j 03:59 -2251 Nov 18 j 11:42	9° 8 06'00	0° 12' 2
direct	-2239 DCC 26 j 13.27	1 1 30 40		min. Earth dist.	-2251 Nov 18 j 11:42 -2251 Nov 19 j 04:41		17.81592 AU
conjunction	-2258 Apr 16 j 01:38	6° Y ′03'29	0°-33'-34	direct	-2250 Feb 01 j 11:01	7° 8 02'16	17.01372 AU
minimum elong	-2258 Apr 16 j 01:38	6° Υ '03'29	0°33'34	max. Earth dist.	-2250 May 22 j 06:06		19 78321 AII
max. Earth dist.	-2258 Apr 15 j 20:44		20.34984 AU			0.000	3321 110
retrograde	-2258 Aug 05 j 02:58	10°Υ15'43		conjunction	-2250 May 23 j 02:39	11° 8 21'39	0°-9'-5
opposition	-2258 Oct 19 j 14:01	8° Υ 14'15	0°-35'-51	minimum elong	-2250 May 23 j 02:38		0°09'04
min. Earth dist.	-2258 Oct 19 j 19:23		18.31485 AU	behind sun begin	-2250 May 22 j 20:54		
direct	-2257 Jan 02 j 01:40	6° Ƴ 13'39		behind sun end	-2250 May 23 j 08:22		
	·				-2250 Aug 01 j 21:32		
conjunction	-2257 Apr 20 j 19:52	10° Y 21′53	0°-31'-5	retrograde	-2250 Sep 10 j 00:22	15° 8 40'32	
minimum elong	-2257 Apr 20 j 19:52	10° Y 21′53	0°31'05		-2250 Oct 19 j 16:15	15° ₹ 8	
max. Earth dist.	-2257 Apr 20 j 11:36		20.27964 AU	opposition	-2250 Nov 23 j 03:58		
retrograde	-2257 Aug 09 j 19:43	14° Ƴ 35′00		min. Earth dist.	-2250 Nov 23 j 21:38		17.75127 AU
opposition	-2257 Oct 24 j 01:26	12° Ƴ 33'22	0°-33'00	direct	-2249 Feb 06 j 05:49	11° 8 33'50	

Attention astronom	ical vear style is used: Th	ne vear -2249	in astronomical co	unting style is the year	2250 BCE in historical of	counting style	
Attention, astronom	-2249 May 13 j 00:13	-	in astronomical co	retrograde	-2243 Oct 12 j 14:34		-
max. Earth dist.	-2249 May 27 j 04:19		19 72019 ATT	opposition	-2243 Dec 24 j 22:05		0°20'30
max. Lartii dist.	224) May 27 J 04.19	15 051 17	19.72019 710	min. Earth dist.	-2243 Dec 25 j 23:25		
conjunction	-2249 May 28 j 03:18	15° 8 54'48	0°-5'-30	direct	-2242 Mar 10 j 14:25		17.09105110
minimum elong	-2249 May 28 j 03:17			max. Earth dist.	-2242 Jun 29 j 19:39		19.37157 AU
behind sun begin	-2249 May 27 j 20:45				,		
behind sun end	-2249 May 28 j 09:50			conjunction	-2242 Jul 01 j 01:37	18° Ⅱ 38'16	0°20'10
retrograde	-2249 Sep 14 j 20:33			minimum elong	-2242 Jul 01 j 01:37	18° Ⅱ 38'16	0°20'13
opposition	-2249 Nov 27 j 21:15	18° 8 11'50	0°-4'-1	retrograde	-2242 Oct 17 j 15:11	23° II 01'50	
min. Earth dist.	-2249 Nov 28 j 16:38	18° 8 09'43	17.69003 AU	opposition	-2242 Dec 29 j 20:46	20° Ⅱ 59'17	0°24'21
direct	-2248 Feb 11 j 00:28	16° 8 07'25		min. Earth dist.	-2242 Dec 30 j 21:34	20° Ⅱ 56'34	17.35389 AU
max. Earth dist.	-2248 May 31 j 05:27	20° 8 26'25	19.66061 AU	direct	-2241 Mar 15 j 16:47	18° ∏ 53′02	
				max. Earth dist.	-2241 Jul 05 j 00:39	23° Ⅱ 19'40	19.33670 AU
conjunction	-2248 Jun 01 j 04:39		0°-1'-49				
minimum elong	-2248 Jun 01 j 04:38		0°01'47	conjunction	-2241 Jul 06 j 06:18		0°23'33
behind sun begin	-2248 May 31 j 21:51			minimum elong	-2241 Jul 06 j 06:17		0°23'36
behind sun end	-2248 Jun 01 j 11:26			retrograde	-2241 Oct 22 j 14:36		
retrograde	-2248 Sep 18 j 19:01			opposition	-2240 Jan 03 j 20:17		
asc. node	-2248 Nov 25 j 00:20		0000104	min. Earth dist.	-2240 Jan 04 j 22:10		17.32159 AU
opposition	-2248 Dec 01 j 15:16		0°00'04	direct	-2240 Mar 19 j 18:24		10.20700 444
min. Earth dist.	-2248 Dec 02 j 11:02		17.63208 AU	max. Earth dist.	-2240 Jul 09 j 04:24	28°Щ06′22	19.30/08 AU
direct	-2247 Feb 14 j 21:13		10.60427 ATT		-2240 Jul 10 j 10:42	200 T 11107	0926145
max. Earth dist.	-2247 Jun 05 j 05:30	25 003 13	19.00427 AU	conjunction minimum elong	-2240 Jul 10 j 10:42 -2240 Jul 10 j 10:41		
conjunction	-2247 Jun 06 j 06:48	250₩07'05	0.02,00	minimum eiong	-2240 Jul 10 j 10.41 -2240 Aug 09 j 03:20	28 п 1107	0 2048
minimum elong	-2247 Jun 06 j 06:48		0°02'02	retrograde	-2240 Aug 09 j 03.20 -2240 Oct 26 j 14:50	0 S 2° S 35'07	
behind sun begin	-2247 Jun 06 j 00:48		0 02 02	opposition	-2239 Jan 07 j 20:09	0°932'33	0°31'31
behind sun end	-2247 Jun 06 j 13:35			min. Earth dist.	-2239 Jan 08 j 21:08		17.29475 AU
retrograde	-2247 Sep 23 j 16:26			mm. Earth dist.	-2239 Jan 20 j 08:38	30°R∏	17.25475710
opposition	-2247 Dec 06 j 10:08		0°04'13	direct	-2239 Mar 24 j 22:18		
min. Earth dist.	-2247 Dec 07 j 07:54				-2239 May 25 j 03:42	0ಂತಾ	
direct	-2246 Feb 19 j 17:27			max. Earth dist.	-2239 Jul 14 j 10:20	2° © 53'59	19.28305 AU
max. Earth dist.	-2246 Jun 10 j 07:49	29° 8 42'09	19.55116 AU		•		
				conjunction	-2239 Jul 15 j 15:22	2°958'33	0°29'47
conjunction	-2246 Jun 11 j 09:45	29° 8 46'08	0°05'44	minimum elong	-2239 Jul 15 j 15:22	2° © 58'32	0°29'51
minimum elong	-2246 Jun 11 j 09:45	29° 8 46'08	0°05'47	retrograde	-2239 Oct 31 j 14:27	7° 5 22'37	
behind sun begin	-2246 Jun 11 j 03:16	29° 8 45'10		opposition	-2238 Jan 12 j 20:37	5°\$20'04	0°34'48
behind sun begin behind sun end	-2246 Jun 11 j 03:16 -2246 Jun 11 j 16:14	29° 8 47'07		opposition min. Earth dist.	-2238 Jan 12 j 20:37 -2238 Jan 13 j 22:05		0°34'48 17.27380 AU
behind sun end	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48	29° ႘ 47'07 0° 川		11			
behind sun end	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16	29° 8 47'07 0°П 4°П07'53		min. Earth dist. direct	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38	5°©17'17 3°©13'17	17.27380 AU
behind sun end retrograde opposition	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54	29° 8 47'07 0°П 4°П07'53 2°П05'19		min. Earth dist. direct	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43	5°\$17'17 3°\$13'17 7°\$46'23	17.27380 AU 0°32'37
behind sun end retrograde opposition min. Earth dist.	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55	0°08'22 17.52589 AU	min. Earth dist. direct conjunction minimum elong	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23	17.27380 AU 0°32'37 0°32'40
behind sun end retrograde opposition min. Earth dist. direct	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09	29° 8 47'07 0°Π 4°Π07'53 2°Π05'19 2°Π02'55 0°Π00'05	17.52589 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45	17.27380 AU 0°32'37
behind sun end retrograde opposition min. Earth dist.	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51	29° 8 47'07 0°Π 4°Π07'53 2°Π05'19 2°Π02'55 0°Π00'05		min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29	17.27380 AU 0°32'37 0°32'40 19.26533 AU
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist.	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33	29°847'07 0°Π 4°Π07'53 2°Π05'19 2°Π02'55 0°Π00'05 4°Π22'43	17.52589 AU 19.50102 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33	29°847'07 0°Ш 4°Щ07'53 2°Щ05'19 2°Щ02'55 0°Щ00'05 4°Щ22'43 4°Щ26'58	17.52589 AU 19.50102 AU 0°09'25	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19	17.27380 AU 0°32'37 0°32'40 19.26533 AU
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05	29°847'07 0°	17.52589 AU 19.50102 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28	29°847'07 0° II 4° II 07'53 2° II 05'19 2° II 02'55 0° II 00'05 4° II 22'43 4° II 26'58 4° II 26'58 4° II 26'07	17.52589 AU 19.50102 AU 0°09'25	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Apr 04 j 06:26	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49	17.52589 AU 19.50102 AU 0°09'25	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Apr 04 j 06:26 -2237 Jul 25 j 23:52	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17	17.52589 AU 19.50102 AU 0°09'25 0°09'28	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Apr 04 j 06:26 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44	17.52589 AU 19.50102 AU 0°09'25 0°09'28	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Apr 04 j 06:26 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52 -2237 Jul 24 j 20:32	5°\$17'17 3°\$13'17 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37 -2245 Dec 17 j 02:27	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44 6°II44'08	17.52589 AU 19.50102 AU 0°09'25 0°09'28	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52 -2237 Jul 24 j 20:32 -2237 Nov 10 j 15:16	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13 16°\$58'34	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44	17.52589 AU 19.50102 AU 0°09'25 0°09'28	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Apr 04 j 06:26 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52 -2237 Jul 24 j 20:32	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13 16°\$58'34 14°\$56'09	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16 19.25431 AU 0°40'38
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37 -2245 Dec 17 j 02:27	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44 6°II44'08	17.52589 AU 19.50102 AU 0°09'25 0°09'28	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52 -2237 Jul 24 j 20:32 -2237 Nov 10 j 15:16 -2236 Jan 22 j 23:05	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13 16°\$58'34 14°\$56'09 14°\$53'32	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16 19.25431 AU 0°40'38
behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 15 j 09:33 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37 -2245 Dec 17 j 02:27 -2244 Feb 29 j 14:17	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44 6°II44'08 4°II41'14	17.52589 AU 19.50102 AU 0°09'25 0°09'28 0°12'29 17.47747 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Jul 25 j 23:52 -2237 Jul 25 j 23:52 -2237 Jul 24 j 20:32 -2237 Nov 10 j 15:16 -2236 Jan 22 j 23:05 -2236 Jan 23 j 22:59	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13 16°\$58'34 14°\$56'09 14°\$53'32 12°\$49'16	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16 19.25431 AU 0°40'38 17.25186 AU
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behind sun end retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun begin terrograde opposition min. Earth dist. direct	-2246 Jun 11 j 16:14 -2246 Jun 15 j 03:48 -2246 Sep 28 j 16:16 -2246 Dec 11 j 05:54 -2246 Dec 12 j 03:51 -2245 Feb 24 j 16:09 -2245 Jun 16 j 13:05 -2245 Jun 16 j 13:05 -2245 Jun 16 j 07:28 -2245 Jun 16 j 18:41 -2245 Oct 03 j 14:52 -2245 Dec 16 j 02:37 -2245 Dec 17 j 02:27 -2244 Feb 29 j 14:17 -2244 Jun 20 j 16:56 -2244 Jun 20 j 16:56 -2244 Jun 20 j 16:56 -2244 Jun 20 j 13:02 -2244 Jun 20 j 13:02 -2244 Jun 19 j 12:37 -2244 Oct 07 j 15:22 -2244 Dec 19 j 23:53 -2244 Dec 20 j 23:33 -2243 Mar 05 j 14:42	29°847'07 0°II 4°II07'53 2°II05'19 2°II02'55 0°II00'05 4°II22'43 4°II26'58 4°II26'58 4°II26'07 4°II27'49 8°II49'17 6°II46'44 6°II44'08 4°II41'14 9°II09'24 9°II09'24 9°II09'24 9°II09'59 9°II05'00 13°II32'13 11°II29'40 11°II27'05 9°II23'54	17.52589 AU 19.50102 AU 0°09'25 0°09'28 0°12'29 17.47747 AU 0°13'05 0°13'08 19.45424 AU 0°16'32 17.43240 AU 0°16'41 0°16'44	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. direct max. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2238 Jan 13 j 22:05 -2238 Mar 30 j 01:38 -2238 Jul 20 j 19:43 -2238 Jul 19 j 14:17 -2238 Nov 05 j 15:02 -2237 Jan 17 j 21:35 -2237 Jan 18 j 21:50 -2237 Jul 25 j 23:52 -2236 Jul 27 j 20:20 -2236 Jul 29 j 00:20 -2236 Jul 30 j 03:44 -2236 Nov 14 j 16:27 -2235 Jan 27 j 00:42 -2235 Jan 27 j 00:42 -2235 Jan 27 j 31:22	5°\$17'17 3°\$13'17 7°\$46'23 7°\$46'23 7°\$41'45 12°\$10'29 10°\$07'58 10°\$05'19 8°\$01'06 12°\$34'32 12°\$34'32 12°\$30'13 16°\$58'34 14°\$56'09 14°\$53'32 12°\$49'16 17°\$18'33 17°\$22'52 21°\$46'48 19°\$44'28 19°\$41'59 17°\$37'38 22°\$07'20	17.27380 AU 0°32'37 0°32'40 19.26533 AU 0°37'51 17.25945 AU 0°35'14 0°35'16 19.25431 AU 0°40'38 17.25186 AU 19.25026 AU 0°37'35 0°37'39 0°43'08 17.25132 AU

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2235 in astronomical counting style is the year 2236 BCE in historical counting style. -2235 Nov 19 i 17:38 26°535'02 retrograde conjunction -2227 Sep 11 i 16:58 0° m 20'31 $0^{\circ}45'47$ minimum elong opposition -2234 Feb 01 j 02:53 24°532'52 0°45'20 -2227 Sep 11 j 16:58 0° m 20'31 0°45'48 min. Earth dist. -2234 Feb 02 j 00:46 24°530'29 17.25728 AU max. Earth dist. -2227 Sep 11 j 03:33 0° m/18'24 19.46643 AU -2234 Apr 18 j 18:18 22°526'08 -2227 Dec 27 j 15:18 direct retrograde 4° m 40'12 -2234 Aug 08 j 09:52 26°555'46 19.26223 AU -2226 Mar 12 j 00:04 2°m/38'59 0°50'42 max. Earth dist. opposition -2226 Mar 12 j 10:33 2° m/37'53 17.48905 AU min. Earth dist. -2234 Aug 09 j 10:39 26°559'42 0°41'32 -2226 May 28 j 06:38 conjunction direct 0° m 33'56 -2234 Aug 09 j 10:39 26°559'42 0°41'35 minimum elong 5° Mp 01'16 0°45'09 -2234 Sep 30 j 07:31 0 $^{\circ}\Omega$ conjunction -2226 Sep 16 j 14:32 -2234 Nov 24 j 18:49 1°**£**23′11 -2226 Sep 16 j 14:32 5° To 01'16 $0^{\circ}45'11$ retrograde minimum elong -2226 Sep 16 j 03:59 4° ነው 59'37 19.51246 AU -2233 Jan 22 j 00:51 30°Rூ max. Earth dist. -2233 Feb 06 j 05:22 29°521'10 0°47'13 -2225 Jan 01 j 11:07 9°m/20'11 opposition retrograde -2233 Feb 07 j 02:19 29°518'54 17.26952 AU -2225 Mar 17 j 02:00 7° m 19'03 0°49'49 min. Earth dist. opposition direct -2233 Apr 23 j 22:09 27°5014'35 min. Earth dist. -2225 Mar 17 j 11:28 7° m 18'03 17.53722 AU -2233 Jul 16 j 10:06 $0^{\circ}\Omega$ direct -2225 Jun 02 j 08:32 5° m 14'16 conjunction -2233 Aug 14 j 13:33 1°**Ω**47'54 0°43'04 conjunction -2225 Sep 21 j 11:04 9°**™**40'16 0°44'13 minimum elong -2233 Aug 14 j 13:32 1°**Ω**47'54 0°43'07 minimum elong -2225 Sep 21 j 11:04 9° Mp 40'16 0°44'13 max. Earth dist. -2233 Aug 13 j 14:59 1°**Ω**44'19 19.27736 AU max. Earth dist. -2225 Sep 21 j 02:06 9°m/38'52 19.56289 AU retrograde -2233 Nov 29 j 20:05 6°Ω11'02 retrograde -2224 Jan 06 j 08:55 13° m 58'22 opposition -2232 Feb 11 j 08:02 4°Ω09'11 0°48'46 opposition -2224 Mar 21 j 03:11 11°**m** 57'19 0°48'36 min. Earth dist. -2232 Feb 12 i 03:35 4°Ω07'04 17.28729 AU min. Earth dist. -2224 Mar 21 i 09:28 11° m 56'39 17.58981 AU direct -2232 Apr 28 j 03:04 2°**Ω**02'47 direct -2224 Jun 06 j 11:12 9° m 52'50 conjunction -2232 Aug 18 j 15:47 6°Ω35'40 0°44'19 conjunction -2224 Sep 25 i 06:48 14° mp 17'27 0°43'00 -2232 Aug 18 j 15:47 6°Ω35'40 0°44'21 minimum elong -2224 Sep 25 i 06:48 14° m 17'27 0°43'01 minimum elong max. Earth dist. -2232 Aug 17 j 17:57 6°**Ω**32'12 19.29775 AU max. Earth dist. -2224 Sep 25 j 01:08 14° Mp 16'34 19.61766 AU retrograde -2232 Dec 03 j 19:59 $10^{\circ}\Omega$ 58'24 retrograde -2223 Jan 10 j 04:06 18° mp 34'43 -2231 Feb 15 j 10:56 8°Ω56'41 0°49'59 opposition -2223 Mar 26 j 04:08 16° m 33'47 0°47'05 opposition -2223 Mar 26 j 09:03 16° Mp 33'16 17.64672 AU min. Earth dist. -2231 Feb 16 j 05:50 8°**Ω**54'39 17.31021 AU min. Earth dist. 6°**Ω**50′29 -2223 Jun 11 j 11:39 14° m 29'40 -2231 May 03 j 06:56 direct direct -2231 Aug 23 j 17:34 11° Ω 22'47 0°45'15 -2223 Sep 30 j 01:22 18° mp 52'48 0°41'31 conjunction conjunction -2231 Aug 23 j 17:34 11° **Ω**22'47 0°45'17 -2223 Sep 30 j 01:22 18° m 52'48 0°41'31 minimum elong minimum elong max. Earth dist. -2231 Aug 22 j 21:37 11° **Ω**19'38 19.32302 AU -2223 Sep 29 j 21:11 18° M 52'09 19.67677 AU max. Earth dist. -2231 Oct 29 j 11:47 15°**Ω** -2222 Jan 15 j 00:46 23° M 09'15 retrograde -2222 Mar 31 j 04:25 21° m 08'27 0°45'17 -2231 Dec 08 j 20:44 $15^{\circ}\Omega 45'02$ retrograde opposition -2230 Jan 19 j 11:49 15°R**Ω** min. Earth dist. -2222 Mar 31 j 06:05 21° m 08'17 17.70782 AU opposition -2230 Feb 20 j 13:46 13°**Ω**43'28 0°50'50 direct -2222 Jun 16 j 11:44 19° Mp 04'44 min. Earth dist. -2230 Feb 21 j 06:46 $13^{\circ}\Omega$ 41'38 17.33761 AU-2222 Oct 04 j 19:14 23° m 26'23 0°39'47 direct -2230 May 08 j 12:56 11°**Ω**37'28 conjunction -2230 Aug 10 j 10:01 15°**Ω** minimum elong -2222 Oct 04 j 19:14 23° M 26'23 0°39'47 max. Earth dist. -2222 Oct 04 j 18:35 23° M 26'17 19.73982 AU -2230 Aug 28 j 18:40 16°**Ω**09'03 0°45'51 retrograde -2221 Jan 19 j 19:33 27° m 41'59 conjunction -2230 Aug 28 j 18:40 16°**Ω**09'03 0°45'53 -2221 Apr 05 j 04:18 25° Mp 41'21 0°43'12 minimum elong opposition -2230 Aug 28 j 00:04 16° Ω06'06 19.35263 AU -2221 Apr 05 j 04:22 25° mp41'21 17.77256 AU max. Earth dist. min. Earth dist. -2221 Jun 21 j 11:05 23° Mp 38'06 -2230 Dec 13 j 19:13 $20^{\circ}\Omega 30'45$ retrograde direct -2229 Feb 25 i 16:48 $18^{\circ}\Omega$ 29'18 $0^{\circ}51'20$ opposition -2229 Feb 26 j 09:11 18°Ω27'32 17.36941 AU -2221 Oct 09 j 11:56 27° m 58'11 0°37'49 min. Earth dist. conjunction direct -2229 May 13 j 16:44 $16^{\circ}\Omega$ 23'31 minimum elong -2221 Oct 09 i 11:56 27° m 58'11 0°37'50 max. Earth dist. -2221 Oct 09 j 12:34 27° mp 58'17 19.80621 AU -2229 Sep 02 j 18:52 $20^{\circ}\Omega$ 54'14 0° 46'09 -2221 Nov 12 j 12:36 0∘**ত** conjunction -2229 Sep 02 j 18:52 $20^{\circ}\Omega$ 54'14 $0^{\circ}46$ '11 retrograde -2220 Jan 24 j 15:16 minimum elong 2° 12'57 -2229 Sep 02 j 01:56 20° Ω51'33 19.38657 AU -2220 Apr 09 j 03:26 max. Earth dist. opposition 0°**£**12'29 0°40'52 -2229 Dec 18 j 19:12 $25^{\circ}\Omega$ 15'19 retrograde min. Earth dist. -2220 Apr 09 j 00:40 0°**£**12'47 17.84028 AU opposition -2228 Mar 01 j 19:28 23°Ω13'57 0°51'28 -2220 Apr 14 j 03:52 30°R, Mp min. Earth dist. -2228 Mar 02 j 09:26 23°**Ω**12'28 17.40524 AU direct -2220 Jun 25 j 09:06 28° Mp 09'41 direct -2228 May 17 j 22:40 21°**Ω**08'25 -2220 Aug 31 j 15:27 0∘**⊽** -2228 Sep 06 j 18:24 25° Ω 38'07 0°46'08 -2220 Oct 13 j 04:00 conjunction conjunction 2°**2**28'13 0°35'38 -2228 Sep 06 j 18:24 25° Ω 38'07 0°46'09 -2220 Oct 13 j 04:00 minimum elong minimum elong 2°**£**28'13 0°35'37 max. Earth dist. -2228 Sep 06 j 03:29 25° **Ω**35'46 19.42442 AU max. Earth dist. -2220 Oct 13 j 07:58 2°**£**28'50 19.87505 AU retrograde -2228 Dec 22 j 16:15 $29^{\circ}\Omega 58'31$ retrograde -2219 Jan 28 j 08:58 6°**£**42'07 opposition -2227 Mar 06 j 21:54 $27^{\circ}\Omega$ 57'15 $0^{\circ}51'16$ opposition -2219 Apr 14 j 01:58 4°**2**41'50 0°38'18 min. Earth dist. -2227 Mar 07 j 11:16 27° **Ω**55'50 17.44512 AU min. Earth dist. -2219 Apr 13 j 21:39 4°**2**42'17 17.90998 AU -2227 May 23 j 01:35 25° **Ω**51'56 -2219 Jun 30 j 07:55 2°**₽**39'32 direct direct

-2227 Sep 06 j 06:51

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2219 in astronomical counting style is the year 2220 BCE in historical counting style. opposition -2219 Oct 17 i 19:04 6°**♀**56'27 0°33'14 -2211 May 20 j 12:43 9°M26'35 0°11'56 conjunction -2219 Oct 17 j 19:04 min. Earth dist. -2211 May 19 j 18:14 9°M28'28 18.46371 AU minimum elong 6° \omega 56'27 0°33'14 -2219 Oct 18 j 00:04 -2211 Aug 05 j 11:57 max. Earth dist. 6°**2**57'13 19.94557 AU direct 7°M27'19 -2218 Feb 02 j 03:12 retrograde 11°**Ω**09'30 -2211 Nov 20 j 14:14 11°M 31'24 -2218 Apr 19 j 00:00 0°35'31 opposition 9°**₽**09'22 conjunction 0°09'10 -2211 Nov 20 j 14:14 11°M31'24 0°09'07 min. Earth dist. -2218 Apr 18 j 17:19 9°**2**10'04 17.98110 AU minimum elong -2211 Nov 20 j 08:39 11°M230'35 -2218 Jul 05 j 04:45 direct 7°**₽**07'31 behind sun begin -2211 Nov 20 j 19:49 11°M32'12 behind sun end -2218 Oct 22 j 09:21 11°**£**22'49 -2211 Nov 21 j 09:12 11°ML34'13 20.49612 AU conjunction 0°30'40 max. Earth dist. -2218 Oct 22 j 09:21 11°**£**22'49 -2210 Jan 29 j 00:36 15° ML minimum elong 0°30'38 max. Earth dist. -2218 Oct 22 j 17:27 11° \alpha 24'03 20.01700 AU retrograde -2210 Mar 08 j 18:49 15°M37'40 -2217 Feb 06 j 19:35 15°**2**34'59 -2210 Apr 17 j 21:48 15°RM retrograde min. Earth dist. -2210 May 24 j 09:03 13°ML40'04 18.52833 AU opposition -2217 Apr 23 j 21:23 13°**△**35'02 0°32'33 min. Earth dist. -2217 Apr 23 j 13:02 13°**♀**35'53 18.05263 AU opposition -2210 May 25 j 04:30 13°M 38'06 0°08'16 direct -2217 Jul 10 j 02:36 11°**2**33'38 direct -2210 Aug 10 j 00:20 11°ML39'09 -2210 Nov 13 j 03:51 15°M conjunction -2217 Oct 26 j 22:48 15°**£**47'17 0°27'55 minimum elong -2217 Oct 26 j 22:48 15°**♀**47'17 0°27'54 conjunction -2210 Nov 24 j 22:10 15°ML41'48 max. Earth dist. -2217 Oct 27 j 07:40 15°**2**48'38 minimum elong -2210 Nov 24 j 22:11 15°M41'48 0°05'50 retrograde -2216 Feb 11 j 12:03 19° **2**58'36 behind sun begin -2210 Nov 24 j 15:56 15° ML40'54 opposition -2216 Apr 27 j 17:51 17° **2**58'44 0°29'24 behind sun end -2210 Nov 25 j 04:26 15° ML42'42 min. Earth dist. -2216 Apr 27 i 07:45 17° **2**59'46 18.12404 AU max. Earth dist. -2210 Nov 25 j 19:29 15°M44'57 20.56020 AU direct -2216 Jul 13 j 21:41 15° £ 57'45 retrograde -2209 Mar 13 j 06:31 19° ML47'21 opposition -2209 May 29 j 19:19 17° ML47'51 0°04'34 conjunction -2216 Oct 30 j 11:35 20° \(\Omega\)09'47 0°25'01 min. Earth dist. -2209 May 28 j 21:38 17° TL 50'02 18.59180 AU -2216 Oct 30 j 11:35 20° **2**09'47 0°25'01 direct -2209 Aug 14 j 14:34 15° M 49'14 minimum elong max. Earth dist. -2216 Oct 30 j 23:04 20° **2**11'32 20.15951 AU retrograde -2215 Feb 15 j 02:32 24° \alpha 20'12 -2209 Nov 29 j 05:32 19°M 50'33 conjunction 0°02'33 -2215 May 02 j 13:42 22°**£**20'28 0°26'06 -2209 Nov 29 j 05:31 19°M50'33 opposition minimum elong 0°02'30 -2215 May 02 j 01:50 22° **2**21'40 18.19446 AU -2209 Nov 28 j 23:00 19°M49'37 min. Earth dist. behind sun begin -2215 Jul 18 j 17:51 20° **2**19'53 -2209 Nov 29 j 12:03 19°M51'29 direct behind sun end -2209 Nov 30 j 03:38 19°ML53'49 20.62298 AU max. Earth dist. -2215 Nov 03 j 23:15 24° **△**30'15 0°22'01 -2208 Mar 16 j 16:46 23°M 55'26 conjunction retrograde -2208 Jun 01 j 11:10 21°ML58'16 18.65395 AU -2215 Nov 03 j 23:15 24°**2**30'15 0°21'59 minimum elong min. Earth dist. -2215 Nov 04 j 11:27 24° **2**32'06 20.22937 AU -2208 Jun 02 j 09:22 21°M 56'02 0°00'53 max. Earth dist. opposition -2214 Feb 19 j 17:20 28°**♀**39'50 -2208 Aug 18 j 00:59 19°M 57'46 retrograde direct -2214 May 07 j 08:51 26° **△**40'08 0°22'41 -2208 Aug 30 j 18:33 20°M 01'55 opposition desc. node min. Earth dist. -2214 May 06 j 19:35 26° **2**41'29 18.26377 AU direct -2214 Jul 23 j 11:01 24° £39'54 conjunction -2208 Dec 02 j 12:26 23°ML57'49 0°00'-51 minimum elong -2208 Dec 02 j 12:26 23°M57'49 0°00'55 conjunction -2214 Nov 08 j 10:21 28°**♀**48'40 0°18'54 behind sun begin -2208 Dec 02 j 05:55 23°M 56'53 -2214 Nov 08 j 10:21 28°**♀**48'40 0°18'53 behind sun end -2208 Dec 02 j 18:57 23°ML58'45 minimum elong max. Earth dist. -2214 Nov 09 j 01:02 28° **2**50'52 20.29798 AU max. Earth dist. -2208 Dec 03 j 12:29 24°ML01'22 20.68426 AU -2214 Nov 28 j 08:42 -2207 Mar 21 j 03:59 28°ML02'06 0°M retrograde -2213 Feb 24 j 06:22 -2207 Jun 06 j 22:45 26°ML02'49 0°-2'-46 retrograde 2°M57'21 opposition -2207 Jun 05 j 22:29 26° ML 05'15 18.71418 AU min. Earth dist. -2213 May 11 j 11:46 0°M 59'15 18.33163 AU min. Earth dist. opposition -2213 May 12 j 02:58 0°M57'42 0°19'10 direct -2207 Aug 22 j 13:09 24° ML04'55 -2213 Jun 05 i 20:03 30°R Ω -2207 Dec 06 j 18:39 28° ML03'46 0°-4'-11 direct -2213 Jul 28 j 05:00 28° **2**57'48 conjunction minimum elong -2213 Sep 16 j 00:40 0°M -2207 Dec 06 i 18:39 28°ML03'47 0°04'14 behind sun begin -2207 Dec 06 j 12:13 28° ML02'51 -2213 Nov 12 j 20:22 3°ML04'57 0°15'42 behind sun end -2207 Dec 07 j 01:05 28° ML04'42 conjunction -2213 Nov 12 j 20:22 3°M04'57 0°15'40 max. Earth dist. -2207 Dec 07 j 19:23 28°ML07'24 20.74331 AU minimum elong behind sun begin -2213 Nov 12 j 18:30 3°ML04'41 -2206 Jan 10 j 02:20 0°**∡**¹ behind sun end -2213 Nov 12 j 22:14 3°M05'13 retrograde -2206 Mar 25 j 13:37 2°**х**¹07'32 min. Earth dist. -2206 Jun 10 j 11:18 max. Earth dist. -2213 Nov 13 j 11:52 3°ML07'16 20.36518 AU 0°**≯**10'47 18.77206 AU retrograde -2212 Feb 28 j 19:15 7°M12'48 opposition -2206 Jun 11 j 11:40 0°**√**08'21 0°-6'-24 -2212 May 15 j 20:21 5°M13'10 0°15'34 -2206 Jun 14 j 23:05 30°RM opposition -2212 May 15 j 04:03 5°**M**14'49 -2206 Aug 26 j 22:20 28°M10'47 min. Earth dist. 18.39828 AU direct -2212 Jul 31 j 19:48 -2206 Nov 02 j 11:16 0°**∡**¹ direct 3°M13'35 conjunction -2212 Nov 16 j 05:44 7°M19'10 0°12'27 conjunction -2206 Dec 11 j 00:46 2°**х** 08'33 0°-7'-26 minimum elong -2212 Nov 16 j 05:44 7°ML19'10 0°12'25 minimum elong -2206 Dec 11 j 00:46 2°**҂**′08'33 0°07'30 behind sun begin -2212 Nov 16 j 01:21 7°M18'32 behind sun begin -2206 Dec 10 j 18:47 2°**х** 07′42 behind sun end -2212 Nov 16 j 10:06 7°M19'48 behind sun end -2206 Dec 11 j 06:44 2°**₹**09'24 max. Earth dist. -2212 Nov 16 j 23:42 7°M21'51 20.43119 AU max. Earth dist. -2206 Dec 12 j 02:58 2°**₹**12'23 20.79972 AU retrograde -2211 Mar 04 j 07:23 11°M26'11 -2205 Mar 30 j 00:19 6°**∡**11'47 retrograde

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2205 in astronomical counting style is the year 2206 BCE in historical counting style. 4°**х** 12'44 0°-9'-59 -2205 Jun 15 i 23:37 conjunction -2197 Jan 11 i 16:44 4°る12'19 0°-30'-31 opposition minimum elong min. Earth dist. -2205 Jun 14 j 21:35 4°**✗**15'20 18.82683 AU -2197 Jan 11 j 16:44 4°る12'19 0°30'34 max. Earth dist. 4°る16'19 21.09109 AU -2205 Aug 31 j 08:36 2°**х** 15'31 -2197 Jan 12 j 20:39 direct -2197 May 01 j 21:54 8°る13'04 retrograde -2197 Jul 18 j 01:26 -2205 Dec 15 j 06:27 6° ₹ 12'15 0°-10'-38 6°る16'38 19.09987 AU conjunction min. Earth dist. -2205 Dec 15 j 06:26 6°**х** 12′15 0°10'42 -2197 Jul 19 j 04:01 minimum elong opposition 6°**ප**13'58 0°-35'-1 -2197 Oct 02 j 19:41 behind sun begin -2205 Dec 15 j 01:21 6°**х** 11′32 direct 4°る17'57 -2205 Dec 15 j 11:32 behind sun end 6°**х** 12′59 -2205 Dec 16 j 08:51 8°る09'14 0°-32'-49 max. Earth dist. 6°**∡**16'06 20.85263 AU conjunction -2196 Jan 15 j 21:09 -2196 Jan 15 j 21:09 retrograde -2204 Apr 02 j 09:25 10°**₹**15'03 minimum elong 8°る09'14 0°32'54 8°**≯**18'38 18.87790 AU -2196 Jan 17 j 00:36 min. Earth dist. -2204 Jun 18 j 09:39 max. Earth dist. 8°る13'10 21.10677 AU -2204 Jun 19 j 11:13 -2196 May 05 j 04:15 12°**⋜**09'54 opposition 8°**∡**16′05 0°-13'-30 retrograde -2204 Sep 03 j 16:40 6°**х¹**19′10 -2196 Jul 21 j 10:03 10°중13'17 19.11370 AU direct min. Earth dist. -2196 Jul 22 j 11:22 10° පි10'45 0°-37'-29 opposition conjunction -2204 Dec 18 j 11:53 10° **₹** 14'58 0°-13'-47 direct -2196 Oct 05 j 23:17 8°**る**14'46 -2204 Dec 18 j 11:53 10° ₹ 14'58 minimum elong 0°13'51 behind sun begin -2204 Dec 18 j 08:21 10° ₹ 14'28 conjunction -2195 Jan 19 j 01:33 12°**⋜**05'46 0°-34'-59 behind sun end -2204 Dec 18 j 15:25 10° ₹ 15'28 minimum elong -2195 Jan 19 j 01:33 12°**⋜**05'46 0°35'03 max. Earth dist. -2204 Dec 19 j 15:16 10° ₹ 18'57 20.90154 AU max. Earth dist. -2195 Jan 20 j 05:14 12°る09'43 21.11873 AU retrograde -2203 Apr 06 j 19:43 14° ₹ 17'22 retrograde -2195 May 09 j 12:32 16°る06'25 opposition -2203 Jun 23 j 22:07 12° ₹ 18'29 0°-16'-57 opposition -2195 Jul 26 j 18:17 14°る07'14 0°-39'-47 min. Earth dist. -2203 Jun 22 j 19:11 12° ₹721'10 18.92452 AU min. Earth dist. -2195 Jul 25 j 16:10 14°る09'50 19.12371 AU direct -2203 Sep 08 j 01:47 10° ₹21'49 direct -2195 Oct 10 j 05:45 12°♂11'16 conjunction -2203 Dec 22 j 17:07 14° ₹ 16'44 0°-16'-51 conjunction -2194 Jan 23 i 06:12 16°**⋜**02'07 0°-36'-59 minimum elong -2203 Dec 22 i 17:07 14° ₹ 16'44 0°16'55 minimum elong -2194 Jan 23 i 06:12 16°**⋜**02'07 0°37'02 max. Earth dist. -2203 Dec 23 j 20:21 14° \(\frac{7}{2}\)20'41 20.94570 AU max. Earth dist. -2194 Jan 24 j 09:12 16°る05'58 21.12674 AU retrograde -2202 Apr 11 j 04:01 18° ₹ 18'47 retrograde -2194 May 13 j 19:23 20°る02'49 min. Earth dist. -2202 Jun 27 j 06:34 16° 722'31 18.96631 AU min. Earth dist. -2194 Jul 30 j 00:24 18° **る**06'03 19.12981 AU -2202 Jun 28 j 08:37 16° ₹ 19'56 0°-20'-17 -2194 Jul 31 j 01:00 18°♂03'35 0°-41'-53 opposition opposition -2202 Sep 12 j 09:07 14° ₹23'29 -2194 Oct 14 j 08:58 16°る07'39 direct direct -2202 Dec 26 j 22:15 18° ₹ 17'36 0°-19'-49 -2193 Jan 27 j 11:08 19°₹58'26 0°-38'-48 conjunction conjunction -2193 Jan 27 j 11:08 19°る58'26 0°38'52 -2202 Dec 26 j 22:15 18° ₹ 17'36 0°19'53 minimum elong minimum elong -2202 Dec 28 j 02:01 18° ₹21'37 20.98488 AU -2193 Jan 28 j 13:59 20°る02'15 21.13088 AU max. Earth dist. max. Earth dist. -2201 Apr 15 j 14:18 22° ₹ 19'18 -2193 May 18 j 03:51 23°**⋜**59'15 retrograde retrograde -2201 Jul 02 j 18:23 20° ₹ 20'27 0°-23'-31 -2193 Aug 03 j 06:24 22°**궁**02'31 19.13176 AU opposition min. Earth dist. min. Earth dist. -2201 Jul 01 j 15:18 20° ₹23'09 19.00278 AU opposition -2193 Aug 04 j 07:23 22°る00'01 0°-43'-48 direct -2201 Sep 16 j 17:26 18° ₹24'10 direct -2193 Oct 18 j 14:17 20°♂04'05 -2192 Jan 31 j 16:14 23°₹54'55 0°-40'-26 conjunction -2201 Dec 31 j 03:06 22° ₹ 17'33 0°-22'-41 conjunction minimum elong -2201 Dec 31 j 03:06 22° ₹ 17'33 0°22'46 minimum elong -2192 Jan 31 j 16:14 23°₹54'55 0°40'30 max. Earth dist. -2200 Jan 01 j 06:27 22° ₹21'30 21.01862 AU max. Earth dist. -2192 Feb 01 j 18:05 23°る58'35 21.13055 AU retrograde -2200 Apr 18 j 21:06 26° ₹ 18'56 retrograde -2192 May 21 j 10:53 27°る55'55 min. Earth dist. -2200 Jul 05 j 01:42 24° ₹22'39 19.03398 AU -2192 Aug 07 j 13:45 25°る56'40 0°-45'-31 opposition -2200 Jul 06 i 03:37 24° ₹20'04 0°-26'-37 -2192 Aug 06 j 14:36 25°る58'59 19.12919 AU opposition min. Earth dist. -2200 Sep 19 j 23:50 22° ₹ 23'53 -2192 Oct 21 j 17:38 24°중00'45 direct direct -2199 Jan 03 i 07:49 26° ₹16'36 0°-25'-26 -2191 Feb 03 i 21:50 27°る51'43 0°-41'-54 conjunction conjunction -2199 Jan 03 i 07:49 26° ₹ 16'36 0°25'30 minimum elong minimum elong -2191 Feb 03 i 21:50 27°₹51'43 0°41'58 -2199 Jan 04 j 11:37 26° ₹20'36 21.04737 AU -2191 Feb 04 j 23:09 27°る55'19 21.12573 AU max. Earth dist. max. Earth dist. -2199 Mar 27 j 02:43 0°₹ -2191 Mar 15 j 12:29 0°≈≈ -2199 Apr 23 j 06:58 0°る17'43 retrograde -2191 May 25 j 19:57 retrograde 1°252'59 -2199 May 20 j 18:54 30°R **৴** -2191 Aug 09 j 05:16 30°R♂ -2199 Jul 09 j 09:22 28° ₹21'28 19.06028 AU min. Earth dist. opposition -2191 Aug 11 j 19:56 29°₹53'42 0°-47'-1 opposition -2199 Jul 10 j 12:16 28° ₹ 18'47 0°-29'-35 min. Earth dist. -2191 Aug 10 j 20:47 29°중56'02 19.12183 AU direct -2199 Sep 24 j 07:34 26° ₹22'41 direct -2191 Oct 25 j 22:26 27°₹57'45 -2198 Jan 03 j 04:56 0°る -2190 Jan 05 j 23:56 0°≈ -2198 Jan 07 j 12:11 0°る14'49 0°-28'-2 -2190 Feb 08 j 03:47 1°≈48'59 0°-43'-9 conjunction conjunction -2198 Jan 07 j 12:11 0°る14'49 0°28'07 -2190 Feb 08 j 03:46 minimum elong minimum elong 1°**≈**48'59 0°43'12 max. Earth dist. -2198 Jan 08 j 15:43 0°る18'46 21.07132 AU max. Earth dist. -2190 Feb 09 j 03:41 1°≈52'22 21.11571 AU retrograde -2198 Apr 27 j 13:05 4°る15'44 retrograde -2190 May 30 j 03:21 5°≈50'32 opposition -2198 Jul 14 j 20:33 2°**ට**16'43 0°-32'-23 min. Earth dist. -2190 Aug 15 j 05:21 3°≈53'20 19.10910 AU min. Earth dist. -2198 Jul 13 j 18:49 2°る19'17 19.08213 AU opposition -2190 Aug 16 j 02:13 3°≈51'14 0°-48'-17 direct -2198 Sep 28 j 12:27 0°る20'39 -2190 Oct 30 j 02:01 1°≈55'14

direct

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2189 in astronomical counting style is the year 2190 BCE in historical counting style. -2189 Feb 12 i 10:24 5°≈46'47 0°-44'-13 min. Earth dist. -2182 Sep 16 j 19:42 5°**¥**56'17 18.82017 AU conjunction -2189 Feb 12 j 10:24 5°≈46'47 0°44'16 direct -2182 Nov 30 j 19:11 minimum elong 3°**¥**57′29 -2189 Feb 13 j 09:10 5°≈50'01 21.10022 AU max. Earth dist. -2189 Jun 03 j 13:02 -2181 Mar 17 j 08:38 7°**)** 54'41 0°-44'-40 9° 248'41 retrograde conjunction -2189 Aug 19 j 11:48 -2181 Mar 17 j 08:38 7°**)(**54'41 0°44'42 min. Earth dist. 7°≈51'22 19.09063 AU minimum elong -2189 Aug 20 j 08:11 -2181 Mar 17 j 18:12 7°**升**56'03 20.79407 AU opposition 7°**≈**49'18 0°-49'-20 max. Earth dist. -2181 Jul 06 j 16:12 12°**米**00'50 -2189 Nov 03 j 07:15 direct 5°≈53'11 retrograde -2181 Sep 21 j 11:33 opposition 10°**升**00′15 0°-48′-55 9°≈45'10 0°-45'-3 conjunction -2188 Feb 16 j 17:21 min. Earth dist. -2181 Sep 21 j 03:19 10°**米**01'06 18.76751 AU minimum elong -2188 Feb 16 j 17:21 9°≈45'10 0°45'06 direct -2181 Dec 05 j 02:26 8°**升**02'05 max. Earth dist. -2188 Feb 17 j 14:16 9°≈48'08 21.07874 AU -2180 Mar 20 j 20:19 12° ¥ 00'23 0°-43'-43 retrograde -2188 Jun 06 j 20:18 13°≈47'27 conjunction -2180 Mar 20 j 20:20 12° **米** 00'23 0°43'44 opposition -2188 Aug 23 j 14:28 11°**≈**47'58 0°-50'-9 minimum elong min. Earth dist. -2188 Aug 22 j 20:32 11°**≈**49'47 19.06621 AU max. Earth dist. -2180 Mar 21 j 04:11 12° **米** 01'30 20.74015 AU direct -2188 Nov 06 j 10:53 9°≈51'42 retrograde -2180 Jul 10 j 02:39 16°**₩**07'17 opposition -2180 Sep 24 j 19:05 14°**米**06'35 0°-47'-44 conjunction -2187 Feb 20 j 00:41 13°≈44'09 0°-45'-41 min. Earth dist. -2180 Sep 24 j 13:10 14° **★**07'12 18.71240 AU minimum elong -2187 Feb 20 j 00:41 13°≈44'09 0°45'43 direct -2180 Dec 08 j 07:52 12° **₭** 08'08 max. Earth dist. -2187 Feb 20 j 20:17 13°≈46'56 21.05157 AU -2187 Mar 14 j 14:40 15°≈ conjunction -2179 Mar 25 j 08:46 16° **★** 07'37 0°-42'-31 retrograde -2187 Jun 11 j 06:30 17°≈46'51 minimum elong -2179 Mar 25 j 08:46 16°**升** 07'37 0°42'33 opposition -2187 Aug 27 j 20:37 15°≈47'14 0°-50'-43 max. Earth dist. -2179 Mar 25 j 14:40 16° \(\) 08'28 20.68403 AU min. Earth dist. -2187 Aug 27 j 03:17 15°≈49'00 19.03615 AU retrograde -2179 Jul 14 j 16:23 20° **)** 15'20 -2187 Sep 16 j 19:08 15°R≈ opposition -2179 Sep 29 i 02:55 18° ★ 14'31 0°-46'-18 direct -2187 Nov 10 j 16:58 13°≈50'46 min. Earth dist. -2179 Sep 28 j 21:58 18° ¥ 15'02 18.65501 AU -2186 Jan 02 j 12:29 15°≈ direct -2179 Dec 12 j 16:10 16° ¥ 15'46 -2186 Feb 24 j 08:36 17°≈43'47 0°-46'-5 -2178 Mar 29 j 22:18 20°**升** 16'31 0°-41'-6 conjunction conjunction -2186 Feb 24 j 08:36 17°≈43'47 0°46'08 -2178 Mar 29 j 22:18 20° **H** 16'31 0°41'06 minimum elong minimum elong -2178 Mar 30 j 02:23 20° ¥ 17'07 20.62536 AU -2186 Feb 25 j 02:20 17°≈46'18 21.01882 AU max. Earth dist. max. Earth dist. -2178 Jul 19 j 04:11 24° **★**25'03 -2186 Jun 15 j 13:37 21°≈46'56 retrograde retrograde -2186 Aug 31 j 11:59 19°≈48'40 19.00087 AU -2178 Oct 03 j 11:14 22° **★**24'09 0°-44'-36 min. Earth dist. opposition -2186 Sep 01 j 02:47 19°≈47'09 -2178 Oct 03 j 08:53 22° **∺**24'24 18.59504 AU 0°-51'-3 min. Earth dist. opposition -2186 Nov 14 j 20:49 17°≈50'26 -2178 Dec 16 j 22:52 20° ¥25'06 direct direct -2185 Feb 28 j 17:05 21°≈44'06 0°-46'-15 -2177 Apr 03 j 12:47 24° **★**27'12 0°-39'-26 conjunction conjunction -2185 Feb 28 j 17:05 21°≈44'06 0°46'18 -2177 Apr 03 j 12:47 24°**米**27'12 0°39'28 minimum elong minimum elong max. Earth dist. -2185 Mar 01 j 09:20 21°≈46'25 20.98132 AU max. Earth dist. -2177 Apr 03 j 14:20 24° \(\frac{1}{2}\)27'26 20.56419 AU retrograde -2185 Jun 20 j 00:10 25°≈47'45 retrograde -2177 Jul 23 j 19:08 28°**∺** 36'36 opposition -2185 Sep 05 j 08:56 23°≈47'48 0°-51'-7 opposition -2177 Oct 07 j 20:07 26° ★35'35 0°-42'-40 min. Earth dist. -2185 Sep 04 j 18:46 23°≈49'15 18.96108 AU min. Earth dist. -2177 Oct 07 j 19:07 26° ¥35'41 18.53244 AU -2185 Nov 19 j 03:15 21°≈50'48 direct -2177 Dec 21 j 08:25 24° ₩ 36'12 direct -2184 Mar 04 j 01:54 25°≈45'13 0°-46'-12 -2176 Apr 07 j 04:04 28° **)** 39'42 0°-37'-34 conjunction conjunction -2184 Mar 04 j 01:54 25°≈45'13 0°46'15 -2176 Apr 07 j 04:04 28° **¥** 39'42 0°37'34 minimum elong minimum elong -2184 Mar 04 j 16:26 25°≈47'17 20.93941 AU -2176 Apr 07 j 03:42 28° \(39'39 \) 20.50007 AU max. Earth dist. max. Earth dist. -2184 Jun 23 i 07:55 29°≈49'25 retrograde -2176 Apr 30 i 13:17 $0^{\circ}\Upsilon$ -2176 Jul 27 i 08:29 2° Y 49'57 opposition -2184 Sep 08 i 15:21 27°≈49'17 0°-50'-57 retrograde 0°Υ48'50 0°-40'-28 min. Earth dist. -2184 Sep 08 i 03:32 27°≈50'30 18.91730 AU opposition -2176 Oct 11 i 05:44 direct -2184 Nov 22 j 07:41 25°≈52'00 min. Earth dist. -2176 Oct 11 j 07:20 0°**Υ**48'40 18.46688 AU -2176 Oct 31 j 02:51 30°R € -2183 Mar 08 j 11:28 29°≈47'15 0°-45'-55 direct -2176 Dec 24 j 17:10 28° \(\frac{1}{49}\) 49'05 conjunction -2183 Mar 08 j 11:28 29°≈47'15 0°45'57 -2175 Feb 15 j 22:11 $0^{\circ}\Upsilon$ minimum elong -2183 Mar 09 j 00:30 29°≈49'07 20.89403 AU max. Earth dist. -2183 Mar 12 j 04:41 0°**∀** conjunction -2175 Apr 11 j 20:23 2°**Y**54'01 0°-35'-28 retrograde -2183 Jun 27 j 18:58 3°**¥**52'04 minimum elong -2175 Apr 11 j 20:23 2°**Y**54'01 0°35'29 1°**¥**51'46 0°-50'-31 opposition -2183 Sep 12 j 21:46 max. Earth dist. -2175 Apr 11 j 17:04 2°Υ53'32 20.43320 AU -2183 Sep 12 j 10:33 1°**¥**52'55 18.87026 AU retrograde -2175 Aug 01 j 00:00 7°Υ05'08 min. Earth dist. -2183 Nov 11 j 13:28 30°R≈ -2175 Oct 15 j 15:43 5°Υ03'51 0°-38'-3 opposition -2183 Nov 26 j 14:17 -2175 Oct 15 j 18:54 5°**Υ**03'31 18.39861 AU direct 29°**≈**54'11 min. Earth dist. -2183 Dec 11 j 10:12 -2175 Dec 29 j 04:09 3°**Y**03'42 0°**)**€ direct conjunction -2182 Mar 12 j 21:40 3°**¥**50'21 0°-45'-25 conjunction -2174 Apr 16 j 13:43 7°**Ƴ**10′07 0°-33'-9 minimum elong -2182 Mar 12 j 21:40 3°**¥**50′21 0°45'27 minimum elong -2174 Apr 16 j 13:43 7°**Υ**10'07 0°33'10 max. Earth dist. -2182 Mar 13 j 08:58 3°**₭**51'58 20.84539 AU max. Earth dist. -2174 Apr 16 j 08:30 7°**Y**09'21 20.36357 AU -2182 Jul 02 j 04:11 7°**)** 55'49 -2174 Aug 05 j 14:40 11°**Y**22'06 retrograde retrograde -2182 Sep 17 j 04:38 5°**)** 55'22 0°-49'-51 -2174 Oct 20 j 02:28 9°**Y**20'39 0°-35'-23 opposition opposition

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Earth dist. -2173 Oct 24 j 20:52 13°**Y**38'24 18.25531 AU min. Earth dist. -2166 Nov 24 j 08:53 14°**8**38'47 17.76236 AU direct -2172 Jan 07 j 03:25 11°**Y**'38'08 direct -2165 Feb 06 j 16:16 12°**8**36'45 -2165 Apr 25 j 04:06 15°8 -2172 Apr 25 j 02:40 15°**Y**47'36 0°-27'-57 conjunction -2172 Apr 25 j 02:40 15°**Y**47'36 0°27'58 minimum elong conjunction -2165 May 28 j 13:46 16°**8**57'35 0°-5'00 max. Earth dist. -2172 Apr 24 j 16:56 15°**Υ**46'10 20.21876 AU minimum elong -2165 May 28 j 13:46 16°**8**57'35 0°05'00 retrograde -2172 Aug 13 j 22:34 20°**Y**01'18 behind sun begin -2165 May 28 j 07:10 16°856'36 opposition -2172 Oct 28 j 01:29 17°**Υ**59'28 0°-29'-25 behind sun end -2165 May 28 j 20:23 16°**8**58'33 min. Earth dist. -2172 Oct 28 j 10:49 17°**Υ**58'28 18.18181 AU max. Earth dist. -2165 May 27 j 14:53 16°**8**54'06 19.73123 AU direct -2171 Jan 10 j 16:11 15°**Y**57'58 retrograde -2165 Sep 15 j 07:38 21°817'13 opposition -2165 Nov 28 j 08:31 19°**8**14'41 conjunction -2171 Apr 29 j 22:17 20° \bar{\gamma}09'00 0°-25'-4 min. Earth dist. -2165 Nov 29 j 03:45 19°812'35 17.70084 AU minimum elong -2171 Apr 29 j 22:17 20°**Υ**'09'00 0°25'03 direct -2164 Feb 11 j 11:25 17° **8**10'25 max. Earth dist. -2171 Apr 29 j 09:31 20° γ 07'07 20.14519 AU retrograde -2171 Aug 18 j 15:10 24°γ23'35 conjunction -2164 Jun 01 j 15:14 21°**8**32'51 0°-1'-19 opposition -2171 Nov 01 j 13:57 22°**Y**21'33 0°-26'-9 minimum elong -2164 Jun 01 j 15:14 21°**8**32'51 0°01'17 min. Earth dist. -2171 Nov 02 j 00:49 22°**Υ**20'23 18.10826 AU behind sun begin -2164 Jun 01 j 08:27 21°831'50 -2170 Jan 15 j 05:58 20°**Y**19'34 behind sun end -2164 Jun 01 j 22:02 21°833'51 direct max. Earth dist. -2164 May 31 j 16:01 21°829'19 19.67104 AU -2170 May 04 j 18:58 24° Υ 32'13 0°-22'-2 -2164 Sep 19 j 05:53 25°853'14 conjunction retrograde -2170 May 04 j 18:59 24°**Υ**32'13 0°22'02 -2164 Oct 07 j 18:00 25°843'56 asc. node minimum elong -2170 May 04 j 05:12 24°**Y**30'11 20.07173 AU max. Earth dist. opposition -2164 Dec 02 j 22:19 23°**8**48'33 17.64199 AU -2170 Aug 23 j 08:34 28°**Y**47'38 retrograde min. Earth dist. -2170 Nov 06 j 03:03 26°**Y**45'28 0°-22'-42 -2163 Feb 15 j 07:56 21°**8**46'10 opposition direct -2170 Nov 06 j 15:36 26°**Y**44'07 18.03519 AU min. Earth dist. -2169 Jan 19 j 20:31 24°**Y**43'03 -2163 Jun 06 j 17:21 26°**8**10'07 0°02'29 direct conjunction -2163 Jun 06 j 17:21 26°**8**10'07 0°02'32 minimum elong -2169 May 09 j 16:16 28°**Υ**'57'19 0°-18'-51 -2163 Jun 06 j 10:34 26°**8**09'07 conjunction behind sun begin $-2169 \text{ May } 09 \text{ j } 16:17 \quad 28^{\circ} \Upsilon 57'19 \quad 0^{\circ} 18'50$ -2163 Jun 07 j 00:08 26°**8**11'08 minimum elong behind sun end max. Earth dist. -2169 May 08 j 23:35 28° Υ 54'50 19.99930 AU max. Earth dist. -2163 Jun 05 j 15:41 26°806'12 19.61345 AU -2169 May 27 j 07:49 0° 8 -2163 Aug 21 j 06:14 Π °0 retrograde -2169 Aug 28 j 02:00 3°**8**13'36 retrograde -2163 Sep 24 j 03:19 0°**Ⅲ**31'13 opposition -2169 Nov 10 j 16:59 1°811'16 0°-19'-6 -2163 Oct 28 j 12:25 30°R8 min. Earth dist. -2169 Nov 11 j 06:56 1°809'46 17.96361 AU opposition -2169 Dec 10 j 01:38 30°RY min. Earth dist. -2163 Dec 07 j 19:14 28°\(\begin{aligned} 26'19 & 17.58580 \text{ AU} \end{aligned} \) direct -2168 Jan 24 j 12:04 29°**Y**08'25 direct -2162 Feb 20 j 04:23 26°823'50 -2168 Mar 09 j 06:40 -2162 May 29 j 10:11 0°8 -2168 May 13 j 14:23 3°**8**24'19 0°-15'-32 -2162 Jun 11 i 20:14 0°**Д**49'16 0°06'12 conjunction conjunction -2162 Jun 11 i 20:14 minimum elong -2168 May 13 j 14:23 3°**8**24'19 0°15'31 minimum elong 0°**Ⅱ**49'16 0°06'15 behind sun begin -2168 May 13 j 13:17 3°**8**24'10 behind sun begin -2162 Jun 11 j 13:50 0°**Ⅱ**48'18 behind sun end -2168 May 13 i 15:29 3°824'29 behind sun end -2162 Jun 12 i 02:39 0°**I**I50'14 max. Earth dist. -2168 May 12 j 21:12 3°**8**21'45 19.92854 AU max. Earth dist. -2162 Jun 10 j 18:01 0°**Д**45'14 19.55848 AU retrograde -2168 Aug 31 j 20:41 7°841'28 retrograde -2162 Sep 29 j 03:32 5°**Ⅱ**10'59 opposition -2168 Nov 14 j 07:40 5°**8**39'02 0°-15'-21 -2162 Dec 11 j 17:02 3°II08'28 0°08'53 opposition 3°**Д**06'03 17.53216 AU min. Earth dist. -2168 Nov 14 j 22:49 5°**と**37'24 17.89391 AU min. Earth dist. -2162 Dec 12 j 15:14 direct -2167 Jan 28 j 04:22 3°**8**35'47 direct -2161 Feb 25 j 03:22 1°**Ⅱ**03'18 conjunction -2167 May 18 j 13:20 7°**8**53'20 0°-12'-7 conjunction -2161 Jun 16 j 23:34 5°II30'05 0°09'53 -2167 May 18 j 13:20 7°**8**53'20 -2161 Jun 16 j 23:34 5°**Ⅱ**30′05 0°09'56 minimum elong 0°12'07 minimum elong -2167 May 18 j 08:51 7°**8**52'41 -2161 Jun 16 j 18:07 5°**Ⅱ**29'16 behind sun begin behind sun begin -2167 May 18 j 17:50 7°**8**54'00 -2161 Jun 17 j 05:01 5°**I**I30'54 behind sun end behind sun end 7°**8**50'20 19.86007 AU -2161 Jun 15 j 19:30 max. Earth dist. -2167 May 17 j 17:22 max. Earth dist. 5°**I**25'45 19.50621 AU retrograde -2167 Sep 05 j 15:19 12°**8**11'20 retrograde -2161 Oct 04 j 01:23 9°**Ⅲ**52'22 opposition -2167 Nov 18 j 23:03 10°**8**08'49 0°-11'-29 opposition -2161 Dec 16 j 13:39 7°**Ⅱ**49'50 0°12'59 min. Earth dist. -2167 Nov 19 j 15:42 10°**8**07'01 17.82681 AU min. Earth dist. -2161 Dec 17 j 13:42 7°**I**47'12 17.48156 AU direct -2166 Feb 01 j 21:51 8°**8**05'12 direct -2160 Mar 01 j 00:47 5°**Ⅱ**44'21 max. Earth dist. -2160 Jun 19 j 22:39 10°**Д**07'58 19.45723 AU

-2166 May 23 j 13:19 12°**8**24'25 0°-8'-36

conjunction

Attention, astronom							age 17
and the second s					2161 BCE in historical of		
conjunction	-2160 Jun 21 j 03:16			max. Earth dist.	-2152 Jul 29 j 10:20	18°99'05	19.24733 AU
minimum elong	-2160 Jun 21 j 03:16		0°13'34		0150 X 1 00 : 10 00	10000001	0005146
behind sun begin	-2160 Jun 20 j 23:41			conjunction	-2152 Jul 30 j 13:38		0°37'46
behind sun end	-2160 Jun 21 j 06:51			minimum elong	-2152 Jul 30 j 13:38		0°37'49
retrograde	-2160 Oct 08 j 02:36		0017101	retrograde	-2152 Nov 15 j 02:50		09.4211.0
opposition	-2160 Dec 20 j 10:52 -2160 Dec 21 j 10:49			opposition min. Earth dist.	-2151 Jan 27 j 10:56 -2151 Jan 28 j 09:36		0°43'19
min. Earth dist. direct	-2150 Dec 21 j 10.49 -2159 Mar 06 j 01:54		17.43426 AU	direct	-2151 Jan 28 J 09:36 -2151 Apr 14 J 00:22		17.24633 AU
max. Earth dist.	-2159 Jun 25 j 01:53		10 /1178 ATT	direct	-2131 Apr 14 J 00.22	10 30 10	
max. Earth dist.	-2139 Juli 23 j 01.33	14 1131 24	19.411/6 AU	conjunction	-2151 Aug 04 j 17:30	23°0511'58	0°39'51
conjunction	-2159 Jun 26 i 07:28	1.4°∏56'00	0°17'06	minimum elong	-2151 Aug 04 j 17:30		0°39'54
minimum elong	-2159 Jun 26 j 07:28			max. Earth dist.	-2151 Aug 04 j 17:30		
retrograde	-2159 Oct 13 j 00:34		0 17 07	retrograde	-2151 Nov 20 j 03:47		17.24770 AC
opposition	-2159 Dec 25 j 08:50		0°20'57	opposition	-2150 Feb 01 j 13:10		0°45'29
min. Earth dist.	-2159 Dec 26 j 10:25			min. Earth dist.	-2150 Feb 02 j 11:16		
direct	-2158 Mar 11 j 01:04		17.37077 AO	direct	-2150 Apr 19 j 04:26		17.23370 AC
max. Earth dist.	-2158 Jun 30 j 05:43		19 37073 AU	direct	-2130 Apr 17 j 04.20	23 32030	
max. Larm dist.	2130 Jun 30 J 03.43	1) 11333)	17.57075710	conjunction	-2150 Aug 09 j 20:53	28°500'37	0°41'39
conjunction	-2158 Jul 01 j 11:50	19°π40'41	0°20'34	minimum elong	-2150 Aug 09 j 20:53		0°41'41
minimum elong	-2158 Jul 01 j 11:50			max. Earth dist.	-2150 Aug 08 j 19:59		
retrograde	-2158 Oct 18 j 01:45		0 2037	max. Earth dist.	-2150 Sep 11 j 07:44	0°Ω	17.23002 710
opposition	-2158 Dec 30 j 07:26		0°24'46	retrograde	-2150 Sep 11 j 07:44 -2150 Nov 25 j 05:09	2° Ω 24'14	
min. Earth dist.	-2158 Dec 30 j 07:20 -2158 Dec 31 j 08:22			opposition	-2149 Feb 06 j 15:46	$0^{\circ}\Omega 22'14$	0°47'10
direct	-2157 Mar 16 j 04:01		17.33231 AU	min. Earth dist.	-2149 Feb 07 j 12:48		17.26554 AU
max. Earth dist.	-2157 Jul 05 j 10:22		10 33/51 ATT	iiiii. Latui dist.	-2149 Feb 15 j 05:51		17.20334 AU
max. Earth dist.	-2137 Jul 03 j 10.22	24 1121 30	19.55451 AU	direct	-2149 Apr 24 j 08:42		
conjunction	-2157 Jul 06 j 16:11	240Π26/18	0°23'54	direct	-2149 Jun 28 j 02:10	28 3 13 40	
minimum elong	-2157 Jul 06 j 16:11				-2149 Juli 28 J 02.10	0 06	
retrograde	-2157 Oct 22 j 23:58		0 23 30	conjunction	-2149 Aug 14 j 23:49	2° Ω 49'08	0042100
opposition	-2156 Jan 04 j 06:47		0020124	minimum elong	-2149 Aug 14 j 23:49	2° Ω 49'08	0°43'12
min. Earth dist.	-2156 Jan 05 j 08:48			max. Earth dist.	-2149 Aug 14 j 23.49 -2149 Aug 14 j 01:12		19.27288 AU
direct	-2156 Mar 20 j 04:53		17.31691 AU		-2149 Nov 30 j 06:35	7° Ω 12'26	19.27200 AU
direct	-2130 Mai 20 J 04.33	24 Д 40 40		retrograde opposition	-2149 Nov 30 j 00:35	5° Ω 10'36	0°48'50
conjunction	-2156 Jul 10 j 20:37	20°∏12'20	0°27'04	min. Earth dist.	-2148 Feb 12 j 14:27		17.28229 AU
minimum elong	-2156 Jul 10 j 20:36			direct	3	3° Ω 04'13	17.28229 AU
max. Earth dist.	-2156 Jul 09 j 14:24			max. Earth dist.	-2148 Apr 28 j 13:08		19.29216 AU
max. Earm dist.	-2156 Jul 23 j 11:36		19.30401 AU	max. Earm dist.	-2148 Aug 18 j 04:08	/ 663343	19.29210 AU
				:	2149 A 10:02:17	70 027116	0044121
retrograde	-2156 Oct 27 j 01:12	3°536'34	0921151	conjunction	-2148 Aug 19 j 02:17	7° Ω 37'16	
opposition	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24	3°536'34 1°533'52		minimum elong	-2148 Aug 19 j 02:17	7° Ω 37'16	
C	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23	3°536'34 1°533'52 1°531'08	0°31'51 17.29145 AU	minimum elong retrograde	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06	7° Ω 37'16 12° Ω 00'10	0°44'24
opposition min. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36	3°\$36'34 1°\$33'52 1°\$31'08 30°RII		minimum elong retrograde opposition	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26	7° Ω 37'16 12° Ω 00'10 9° Ω 58'28	0°44'24 0°50'00
opposition	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15	3°\$36'34 1°\$33'52 1°\$31'08 30°R∏ 29°∏27'07		minimum elong retrograde opposition min. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32	7° Ω 37'16 12° Ω 00'10 9° Ω 58'28 9° Ω 56'25	0°44'24
opposition min. Earth dist. direct	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$	17.29145 AU	minimum elong retrograde opposition min. Earth dist. direct	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22	7°Ω37'16 12°Ω00'10 9°Ω58'28 9°Ω56'25 7°Ω52'15	0°44'24 0°50'00 17.30406 AU
opposition min. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$		minimum elong retrograde opposition min. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32	7°Ω37'16 12°Ω00'10 9°Ω58'28 9°Ω56'25 7°Ω52'15	0°44'24 0°50'00 17.30406 AU
opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05	17.29145 AU 19.27960 AU	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08	7° Ω 37'16 12° Ω 00'10 9° Ω 58'28 9° Ω 56'25 7° Ω 52'15 12° Ω 21'35	0°44′24 0°50′00 17.30406 AU 19.31629 AU
opposition min. Earth dist. direct max. Earth dist. conjunction	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12	3°\$36'34 1°\$33'52 1°\$31'08 30°\$II 29°II27'07 0°\$ 3°\$55'05	17.29145 AU 19.27960 AU 0°30'04	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08	7°Ω37'16 12°Ω00'10 9°Ω58'28 9°Ω56'25 7°Ω52'15 12°Ω21'35	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12	3°\$36'34 1°\$33'52 1°\$31'08 30°\$II 29°II27'07 0°\$ 3°\$55'05 3°\$59'38 3°\$59'38	17.29145 AU 19.27960 AU 0°30'04	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14	7°Ω37'16 12°Ω00'10 9°Ω58'28 9°Ω56'25 7°Ω52'15 12°Ω21'35 12°Ω24'46 12°Ω24'46	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07	3°\$36'34 1°\$33'52 1°\$31'08 30°\$.II 29°II27'07 0°\$ 3°\$55'05 3°\$59'38 3°\$59'38 8°\$23'40	17.29145 AU 19.27960 AU 0°30'04 0°30'07	retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00	7°\Omega37'16 12°\Omega00'10 9°\Omega58'28 9°\Omega56'25 7°\Omega52'15 12°\Omega21'35 12°\Omega24'46 12°\Omega24'46 15°\Omega	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54	3°\$36'34 1°\$33'52 1°\$31'08 30°\$.II 29°II 27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49	7°\Omega37'16 12°\Omega00'10 9°\Omega58'28 9°\Omega56'25 7°\Omega52'15 12°\Omega21'35 12°\Omega24'46 12°\Omega24'46 15°\Omega 16°\Omega47'11	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00 6°\$18'12	17.29145 AU 19.27960 AU 0°30'04 0°30'07	retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20	7° \mathcal{O}37'16 12° \mathcal{O}00'10 9° \mathcal{O}58'28 9° \mathcal{O}56'25 7° \mathcal{O}52'15 12° \mathcal{O}21'35 12° \mathcal{O}24'46 12° \mathcal{O}24'46 15° \mathcal{O} 16° \mathcal{O}47'11 15° \mathcal{O}A	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU	retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26	7° \mathcal{Q}37'16 12° \mathcal{Q}00'10 9° \mathcal{Q}58'28 9° \mathcal{Q}56'25 7° \mathcal{Q}52'15 12° \mathcal{Q}21'35 12° \mathcal{Q}24'46 12° \mathcal{Q}24'46 15° \mathcal{Q} 16° \mathcal{Q}47'11 15° \mathcal{Q} 14° \mathcal{Q}45'37	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43	7° \mathcal{O}37'16 12° \mathcal{O}00'10 9° \mathcal{O}58'28 9° \mathcal{O}56'25 7° \mathcal{O}52'15 12° \mathcal{O}21'35 12° \mathcal{O}24'46 12° \mathcal{O}24'46 15° \mathcal{O} 16° \mathcal{O}47'11 15° \mathcal{O} 14° \mathcal{O}445'37 14° \mathcal{O}43'45	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31 -2154 Jul 20 j 00:13	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU	retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37	7° \mathcal{O}37'16 12° \mathcal{O}00'10 9° \mathcal{O}58'28 9° \mathcal{O}56'25 7° \mathcal{O}52'15 12° \mathcal{O}21'35 12° \mathcal{O}24'46 15° \mathcal{O} 16° \mathcal{O}47'11 15° \mathcal{O} 14° \mathcal{O}45'37 14° \mathcal{O}43'45 12° \mathcal{O}39'36	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16
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opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31 -2154 Jul 20 j 00:13 -2154 Jul 21 j 05:25 -2153 Jan 18 j 07:46 -2153 Jan 19 j 07:50 -2153 Apr 04 j 16:23 -2153 Jul 25 j 06:32	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$55'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32 8°\$47'08 8°\$47'08 13°\$11'13 11°\$08'37 11°\$05'59 9°\$01'41 13°\$30'48	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU 0°32'52 0°32'55 0°38'06 17.25615 AU 19.25115 AU	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist.	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 Aug 23 j 08:08 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37 -2146 Aug 28 j 10:24 -2146 Aug 29 j 05:18 -2146 Aug 29 j 05:18 -2146 Dec 14 j 06:53 -2145 Feb 26 j 19:59	7° \(\Omega 37'16 \) 12° \(\Omega 00'10 \) 9° \(\Omega 58'28 \) 9° \(\Omega 56'25 \) 7° \(\Omega 52'15 \) 12° \(\Omega 21'35 \) 12° \(\Omega 24'46 \) 15° \(\Omega 47'11 \) 15° \(\Omega 43'45 \) 14° \(\Omega 43'45 \) 12° \(\Omega 39'36 \) 15° \(\Omega 17' \) \(\Omega 08'23 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 19° \(\Omega 31'46 \) 19° \(\Omega 30'00 \)	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16 0°50'49 17.33034 AU 19.34485 AU 0°45'49 0°45'51 0°51'16
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Jul 20 j 00:13 -2154 Jul 21 j 05:25 -2153 Jan 18 j 07:46 -2153 Jan 19 j 07:50 -2153 Apr 04 j 16:23 -2153 Jul 26 j 09:44	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$55'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32 8°\$47'08 8°\$47'08 13°\$511'13 11°\$08'37 11°\$08'37 11°\$05'59 9°\$01'41 13°\$35'05	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU 0°32'52 0°32'55 0°38'06 17.25615 AU 19.25115 AU 0°35'26	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 Aug 23 j 08:08 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37 -2146 Aug 28 j 10:24 -2146 Aug 29 j 05:18 -2146 Aug 29 j 05:18 -2146 Dec 14 j 06:53 -2145 Feb 26 j 03:29	7° \(\Omega 37'16 \) 12° \(\Omega 00'10 \) 9° \(\Omega 58'28 \) 9° \(\Omega 56'25 \) 7° \(\Omega 52'15 \) 12° \(\Omega 21'35 \) 12° \(\Omega 24'46 \) 15° \(\Omega 47'11 \) 15° \(\Omega 43'45 \) 14° \(\Omega 43'45 \) 12° \(\Omega 39'36 \) 15° \(\Omega 17' \) \(\Omega 08'23 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 19° \(\Omega 31'46 \) 19° \(\Omega 30'00 \)	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16 0°50'49 17.33034 AU 19.34485 AU 0°45'49 0°45'51 0°51'16
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2155 Jul 16 j 01:12 -2155 Nov 01 j 00:07 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31 -2154 Jul 20 j 00:13 -2154 Jul 21 j 05:25 -2153 Jan 18 j 07:46 -2153 Jan 19 j 07:50 -2153 Jan 25 j 06:32 -2153 Jul 26 j 09:44 -2153 Jul 26 j 09:44	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$55'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32 8°\$47'08 8°\$47'08 13°\$31'13 11°\$08'37 11°\$05'59 9°\$01'41 13°\$33'48	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU 0°32'52 0°32'55 0°38'06 17.25615 AU 19.25115 AU 0°35'26	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37 -2146 Jul 24 j 03:59 -2146 Aug 28 j 10:24 -2146 Aug 29 j 05:18 -2146 Aug 29 j 05:18 -2146 Dec 14 j 06:53 -2145 Feb 26 j 03:29 -2145 Feb 26 j 19:59 -2145 May 14 j 02:52	7° \(\Omega 37'16 \) 12° \(\Omega 00'10 \) 9° \(\Omega 58'28 \) 9° \(\Omega 56'25 \) 7° \(\Omega 52'15 \) 12° \(\Omega 21'35 \) 12° \(\Omega 24'46 \) 15° \(\Omega 47'11 \) 15° \(\Omega 6 \) 14° \(\Omega 43'45 \) 12° \(\Omega 39'36 \) 15° \(\Omega 6 \) 17° \(\Omega 08'23 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 17° \(\Omega 13'15 \) 19° \(\Omega 31'46 \) 19° \(\Omega 30'00 \) 17° \(\Omega 25'57 \)	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16 0°50'49 17.33034 AU 19.34485 AU 0°45'49 0°45'51 0°51'16 17.36119 AU
opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31 -2154 Jul 20 j 00:13 -2154 Jul 21 j 05:25 -2154 Jul 21 j 05:25 -2154 Nov 06 j 01:26 -2153 Jan 18 j 07:46 -2153 Jan 19 j 07:50 -2153 Jul 26 j 09:44 -2153 Jul 26 j 09:44 -2153 Jul 26 j 09:44 -2153 Nov 11 j 01:27	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$55'05 3°\$55'05 3°\$55'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32 8°\$47'08 8°\$47'08 13°\$31'13 11°\$08'37 11°\$05'59 9°\$01'41 13°\$35'05 13°\$35'05 17°\$59'09	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU 0°32'52 0°32'55 0°38'06 17.25615 AU 19.25115 AU 0°35'26 0°35'29	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct conjunction	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37 -2146 Jul 24 j 03:59 -2146 Aug 28 j 10:24 -2146 Aug 29 j 05:18 -2146 Aug 29 j 05:18 -2146 Dec 14 j 06:53 -2145 Feb 26 j 03:29 -2145 Feb 26 j 19:59 -2145 Sep 03 j 05:43	7° \(\Omega 37'16 \) 12° \(\Omega 00'10 \) 9° \(\Omega 58'28 \) 9° \(\Omega 56'25 \) 7° \(\Omega 52'15 \) 12° \(\Omega 21'35 \) 12° \(\Omega 24'46 \) 15° \(\Omega 47'11 \) 15° \(\Omega 6 \) 14° \(\Omega 43'45 \) 12° \(\Omega 39'36 \) 15° \(\Omega 6 \) 17° \(\Omega 08'23 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'25 \) 19° \(\Omega 31'46 \) 19° \(\Omega 30'00 \) 17° \(\Omega 25'57 \) 21° \(\Omega 56'51 \)	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16 0°50'49 17.33034 AU 19.34485 AU 0°45'49 0°45'51 0°51'16 17.36119 AU 0°46'04
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opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-2156 Oct 27 j 01:12 -2155 Jan 08 j 06:24 -2155 Jan 09 j 07:23 -2155 Feb 17 j 12:36 -2155 Mar 25 j 09:15 -2155 Apr 29 j 18:04 -2155 Jul 14 j 20:13 -2155 Jul 16 j 01:12 -2154 Jan 13 j 06:54 -2154 Jan 14 j 08:22 -2154 Mar 30 j 11:31 -2154 Jul 20 j 00:13 -2154 Jul 21 j 05:25 -2154 Jul 21 j 05:25 -2154 Nov 06 j 01:26 -2153 Jan 18 j 07:46 -2153 Jan 19 j 07:50 -2153 Jul 26 j 09:44 -2153 Jul 26 j 09:44 -2153 Jul 26 j 09:44 -2153 Nov 11 j 01:27	3°\$36'34 1°\$33'52 1°\$31'08 30°RII 29°II27'07 0°\$ 3°\$55'05 3°\$59'38 8°\$23'40 6°\$21'00 6°\$18'12 4°\$14'07 8°\$42'32 8°\$47'08 8°\$47'08 13°\$511'13 11°\$08'37 11°\$05'59 9°\$01'41 13°\$35'05 13°\$35'05 17°\$59'09 15°\$56'40 15°\$56'403	17.29145 AU 19.27960 AU 0°30'04 0°30'07 0°35'06 17.27035 AU 19.26191 AU 0°32'52 0°32'55 0°38'06 17.25615 AU 19.25115 AU 0°35'26 0°35'29 0°40'51	minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct conjunction	-2148 Aug 19 j 02:17 -2148 Dec 04 j 07:06 -2147 Feb 15 j 21:26 -2147 Feb 16 j 16:32 -2147 May 03 j 17:22 -2147 Aug 23 j 08:08 -2147 Aug 24 j 04:14 -2147 Aug 24 j 04:14 -2147 Oct 06 j 15:00 -2147 Dec 09 j 07:49 -2146 Feb 15 j 10:20 -2146 Feb 21 j 00:26 -2146 Feb 21 j 17:43 -2146 May 08 j 22:37 -2146 Jul 24 j 03:59 -2146 Aug 28 j 10:24 -2146 Aug 29 j 05:18 -2146 Aug 29 j 05:18 -2146 Dec 14 j 06:53 -2145 Feb 26 j 03:29 -2145 Feb 26 j 19:59 -2145 Sep 03 j 05:43	7° \(\Omega 37'16 \) 12° \(\Omega 00'10 \) 9° \(\Omega 58'28 \) 9° \(\Omega 56'25 \) 7° \(\Omega 52'15 \) 12° \(\Omega 24'46 \) 12° \(\Omega 24'46 \) 15° \(\Omega 0 47'11 \) 15° \(\Omega 0 43'45 \) 12° \(\Omega 39'36 \) 15° \(\Omega 0 11'22 \) 17° \(\Omega 11'22 \) 17° \(\Omega 11'22 \) 21° \(\Omega 33'15 \) 19° \(\Omega 31'46 \) 19° \(\Omega 30'00 \) 17° \(\Omega 25'57 \) 21° \(\Omega 56'51 \) 21° \(\Omega 56'51 \) 21° \(\Omega 54'10 \)	0°44'24 0°50'00 17.30406 AU 19.31629 AU 0°45'15 0°45'16 0°50'49 17.33034 AU 19.34485 AU 0°45'49 0°45'51 0°51'16 17.36119 AU 0°46'04 0°46'05

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2144 in astronomical counting style is the year 2145 BCE in historical counting style. -2144 Mar 02 j 06:03 $24^{\circ}\Omega$ 16'41 $0^{\circ}51'22$ retrograde -2136 Jan 25 i 02:50 3°**♀**17'15 opposition opposition min. Earth dist. -2144 Mar 02 j 20:11 24°Ω15'11 17.39640 AU -2136 Apr 09 j 14:25 1°**2**16'49 0°40'28 -2144 May 18 j 08:42 22°**Ω**11'06 min. Earth dist. -2136 Apr 09 j 11:47 1°**2**17'05 17.83631 AU direct -2136 May 12 j 21:42 30°R M -2136 Jun 25 j 21:00 29° Mp 14'02 -2144 Sep 07 j 05:16 $26^{\circ}\Omega 40'58$ 0°46'00 conjunction direct -2144 Sep 07 j 05:16 26° Ω40'58 0°46'02 -2136 Aug 07 j 08:39 minimum elong 0ಂರ -2144 Sep 06 j 14:12 26°Ω38'36 19.41544 AU max. Earth dist. -2144 Nov 05 j 13:59 -2136 Oct 13 j 15:44 0° m conjunction 3°**△**32'43 0°35'15 -2136 Oct 13 j 15:44 retrograde -2144 Dec 23 j 03:36 1°M01'31 minimum elong 3°**2**32'43 0°35'16 -2136 Oct 13 j 19:26 -2143 Feb 10 j 21:41 30°Ŗ**Ω** max. Earth dist. 3°**೨**33'17 19.87094 AU opposition -2143 Mar 07 j 08:38 29°**Ω**00'11 0°51'06 retrograde -2135 Jan 28 j 20:29 7°**-**46'42 min. Earth dist. -2143 Mar 07 j 21:58 -2135 Apr 14 j 13:17 28°**Ω**58'46 17.43609 AU opposition 5°**-**46′27 0°37'53 -2135 Apr 14 j 09:21 direct -2143 May 23 j 12:23 26° **Ω** 54'48 min. Earth dist. 5°**£**46'52 17.90561 AU -2135 Jun 30 j 18:39 -2143 Aug 20 j 17:32 direct 3°**₽**44'09 -2135 Oct 18 j 06:55 conjunction -2143 Sep 12 j 03:46 1° Mp 23'32 0°45'37 conjunction 8°**ഫ**01'12 0°32'50 minimum elong -2143 Sep 12 j 03:46 1°M 23'32 0°45'39 minimum elong -2135 Oct 18 j 06:55 8°**₽**01'12 0°32'49 max. Earth dist. -2143 Sep 11 j 14:33 1°Mp21'27 19.45747 AU max. Earth dist. -2135 Oct 18 j 11:34 8°**2**01'55 19.94082 AU retrograde -2143 Dec 28 j 01:55 5° m 43'20 retrograde -2134 Feb 02 j 14:50 12° **△** 14'21 opposition -2142 Mar 12 j 10:47 3° mp 42'04 0° 50'30 opposition -2134 Apr 19 j 11:29 10°**♀**14'15 0°35'04 min. Earth dist. -2142 Mar 12 j 21:09 3° Mp 40'58 17.48031 AU min. Earth dist. -2134 Apr 19 j 05:05 10° **2**14'55 17.97590 AU direct -2142 May 28 j 17:22 1° m 36'56 direct -2134 Jul 05 i 16:31 8°**₽**12'23 conjunction -2142 Sep 17 i 01:26 6° m 04'25 0°44'57 conjunction -2134 Oct 22 j 21:31 12°**2**27'50 0°30'14 minimum elong -2142 Sep 17 j 01:26 6° m 04'25 0°44'58 minimum elong -2134 Oct 22 j 21:31 12°**2**27'50 0°30'14 max. Earth dist. -2142 Sep 16 j 14:59 6° 1002'46 19.50406 AU max. Earth dist. -2134 Oct 23 i 05:10 12° \(\Omega\) 29'00 20.01123 AU retrograde -2141 Jan 01 j 22:07 10° m 23'25 retrograde -2133 Feb 07 j 07:28 16° **△**40'07 opposition -2141 Mar 17 j 12:42 8° m 22'14 0°49'34 opposition -2133 Apr 24 j 08:55 14° **2**40'09 0°32'04 min. Earth dist. -2141 Mar 17 j 21:56 8° m 21'15 17.52933 AU min. Earth dist. -2133 Apr 24 j 01:07 14°**Ω**40'57 18.04628 AU -2141 Jun 02 j 19:06 6° m 17'23 -2133 Jul 10 j 13:21 12°**2**38'43 direct direct -2141 Sep 21 j 21:57 10° mp 43'31 0°43'59 -2133 Oct 27 j 11:06 16° **2**52'32 0°27'28 conjunction conjunction -2141 Sep 21 j 21:57 10° m 43'31 0°44'00 -2133 Oct 27 j 11:06 16° **2**52'32 0°27'27 minimum elong minimum elong -2141 Sep 21 j 13:15 10° m 42'09 19.55552 AU -2133 Oct 27 j 19:25 16° **2**53'48 20.08150 AU max. Earth dist. max. Earth dist. -2140 Jan 06 j 19:52 15° M 01'43 -2132 Feb 11 j 23:52 21°**♀**03'57 retrograde retrograde -2140 Mar 21 j 13:58 13° m 00'38 0°48'20 -2132 Apr 28 j 05:37 19°**♀**04'05 0°28'53 opposition opposition -2140 Mar 21 j 19:55 13° m 00'00 17.58303 AU -2132 Apr 27 j 19:52 19°**♀**05'05 18.11634 AU min. Earth dist. min. Earth dist. direct -2140 Jun 06 j 22:09 10° m 56'07 direct -2132 Jul 14 j 09:10 17°**£**03'03 -2140 Sep 25 j 17:46 15° m 20'51 0°42'44 -2132 Oct 30 j 23:55 21°**2**15'15 0°24'33 conjunction conjunction minimum elong -2140 Sep 25 j 17:46 15° m 20'51 0°42'44 minimum elong -2132 Oct 30 j 23:55 21°**£**15'15 0°24'32 max. Earth dist. -2140 Sep 25 j 12:12 15° m 19'59 19.61149 AU max. Earth dist. -2132 Oct 31 j 11:00 21° **2**16'56 20.15112 AU retrograde -2139 Jan 10 j 15:01 19° M 38'14 retrograde -2131 Feb 15 j 15:20 25°**£**25'47 opposition -2139 Mar 26 j 14:53 17° m 37'17 0°46'47 opposition -2131 May 03 j 01:32 23°**£**26'00 0°25'34 min. Earth dist. -2139 Mar 26 j 19:34 17° m 36'48 17.64113 AU min. Earth dist. -2131 May 02 j 14:11 23°**2**27'10 18.18545 AU -2139 Jun 11 j 21:48 15° m 33'10 -2131 Jul 19 i 05:03 21°**£**25'22 direct direct -2139 Sep 30 j 12:32 19° m 56'27 0°41'14 -2131 Nov 04 i 11:45 25° **△**35'55 0°21'31 conjunction conjunction -2139 Sep 30 j 12:32 19° m 56'27 0°41'14 -2131 Nov 04 i 11:45 25° **△**35'55 0°21'31 minimum elong minimum elong -2139 Sep 30 i 08:28 19° m 55'49 19.67178 AU max. Earth dist. max. Earth dist. -2131 Nov 04 i 23:34 25° **△**37'42 20.21986 AU retrograde -2138 Jan 15 j 12:24 24° m 12'59 retrograde -2130 Feb 20 j 05:29 29° **2**45'36 opposition opposition -2138 Mar 31 j 15:17 22° mp 12'12 0°44'57 -2130 May 07 j 20:44 27° **△**45'52 0°22'08 min. Earth dist. -2138 Mar 31 j 16:43 22° m 12'03 17.70325 AU min. Earth dist. -2130 May 07 j 07:44 27° **2**47'11 18.25382 AU -2130 Jul 23 j 22:44 25°**2**45'34 direct -2138 Jun 16 j 22:58 20° m 08'30 direct conjunction -2138 Oct 05 j 06:26 24° m 30'17 0°39'28 conjunction -2130 Nov 08 j 22:47 29° **2**54'29 0°18'24 minimum elong -2138 Oct 05 j 06:26 24° m 30'17 0°39'28 minimum elong -2130 Nov 08 j 22:47 29°**£**54'29 0°18'22 -2138 Oct 05 j 05:45 24° m 30'11 19.73561 AU max. Earth dist. -2130 Nov 09 j 13:24 29°**2**56'41 20.28777 AU max. Earth dist. retrograde -2137 Jan 20 j 06:53 28° Mp 46'00 -2130 Nov 10 j 11:15 0°M -2137 Apr 05 j 15:17 26° m 45'23 0°42'50 retrograde -2129 Feb 24 j 19:31 opposition 4°ML03'18 -2129 May 12 j 14:59 min. Earth dist. -2137 Apr 05 j 15:26 26° m 45'23 17.76853 AU opposition 2°M03'37 0°18'36 direct -2137 Jun 21 j 21:24 24° Mp 42'09 min. Earth dist. -2129 May 12 j 00:05 2°M05'08 18.32126 AU direct -2129 Jul 28 j 17:00 0° M 03'40conjunction -2137 Oct 09 j 23:25 29° m 02'23 0°37'28 minimum elong -2137 Oct 09 j 23:25 29° m 02'23 0°37'28 conjunction -2129 Nov 13 j 08:54 4°M10'59 0°15'12 max. Earth dist. -2137 Oct 09 j 23:55 29° m 02'28 19.80229 AU minimum elong -2129 Nov 13 j 08:54 4°**ጤ**10'59 0°15'10 -2137 Oct 25 j 13:23 behind sun begin -2129 Nov 13 j 06:26 4°M10'38

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2129 in astronomical counting style is the year 2130 BCE in historical counting style. behind sun end -2129 Nov 13 j 11:22 4°MJ11'21 retrograde -2122 Mar 26 j 03:14 3°**х** 16'35 max. Earth dist. -2129 Nov 14 j 00:20 4°M13'18 20.35484 AU min. Earth dist. -2122 Jun 11 j 00:12 1°**尽**19'54 18.76688 AU -2128 Feb 29 j 07:49 -2122 Jun 12 j 00:34 1°**∡**17′28 0°-6'-58 retrograde 8°M.18'59 opposition -2122 Jul 17 j 05:08 opposition -2128 May 16 j 08:18 6°M19'19 0°15'01 30°RM -2128 May 15 j 16:01 -2122 Aug 27 j 10:41 29°M19'57 min. Earth dist. 6°M20′58 18.38814 AU direct -2128 Aug 01 j 08:09 -2122 Oct 06 j 07:55 direct 4°M19'42 0°⊀ -2128 Nov 16 j 18:24 -2122 Dec 11 j 14:12 conjunction 8°M25'30 0°11'57 conjunction 3°**∡**17'54 0°-7'-57 -2122 Dec 11 j 14:12 minimum elong -2128 Nov 16 j 18:24 8°M25'30 0°11'54 minimum elong 3°**х** 17′54 0°08'00 3°**∡**17′04 -2122 Dec 11 j 08:20 behind sun begin -2128 Nov 16 j 13:47 8°M24'49 behind sun begin behind sun end -2128 Nov 16 j 23:01 8° M26'10 behind sun end -2122 Dec 11 j 20:03 3°**х** 18′45 -2122 Dec 12 j 16:20 max. Earth dist. -2128 Nov 17 j 12:31 8°M28'12 20.42140 AU max. Earth dist. 3°**尽**21'44 20.79454 AU retrograde -2127 Mar 04 j 20:19 12°M32'41 retrograde -2121 Mar 30 j 14:04 7°**∡**¹21'18 min. Earth dist. -2127 May 20 j 06:24 10°M34'57 18.45438 AU min. Earth dist. -2121 Jun 15 j 10:55 5°**҂**24'51 18.82155 AU opposition -2127 May 21 j 00:54 10°M33'05 0°11'22 opposition -2121 Jun 16 j 12:46 5°×722'16 0°-10'-33 direct -2127 Aug 06 j 00:01 8°M33'48 direct -2121 Aug 31 j 21:58 3°×725'04 conjunction -2127 Nov 21 j 02:56 12°M38'07 0°08'40 conjunction -2121 Dec 15 j 20:01 7°**∡**¹21'58 0°-11'-9 minimum elong -2127 Nov 21 j 02:55 12°M 38'07 0°08'38 minimum elong -2121 Dec 15 j 20:01 7°**∡**¹21'58 0°11'13 behind sun begin -2127 Nov 20 j 21:13 12° ML37'17 behind sun begin -2121 Dec 15 j 15:08 7°**∡**°21'16 behind sun end -2127 Nov 21 j 08:38 12°M 38'57 behind sun end -2121 Dec 16 j 00:55 7°**∡**¹22'39 max. Earth dist. -2127 Nov 21 i 21:57 12° ML40'57 20.48732 AU max. Earth dist. -2121 Dec 16 j 22:09 7°**∡**125'46 20.84713 AU -2126 Jan 02 i 06:20 15°M retrograde -2120 Apr 02 j 23:02 11°×24'52 retrograde -2126 Mar 09 i 07:53 16° ML44'34 min. Earth dist. -2120 Jun 18 j 23:04 9°**∡**'28'26 18.87213 AU -2126 May 19 j 12:00 15°RML opposition -2120 Jun 20 i 00:26 9°**х** 25′54 0°-14'-3 -2126 May 25 j 16:49 14° 11.45'02 0°07'41 -2120 Sep 04 j 05:42 7°**∡**¹28'58 opposition direct -2126 May 24 j 21:08 14°ML47'01 min Earth dist 18.52009 AU -2126 Aug 10 j 13:02 12°ML46'07 -2120 Dec 19 i 01:43 11° ₹ 24'53 direct conjunction 0°-14'-16 -2126 Oct 24 j 20:00 15°M -2120 Dec 19 j 01:43 11° ₹24'53 minimum elong 0°14'20 -2120 Dec 18 j 22:32 11° ₹24'26 behind sun begin -2120 Dec 19 j 04:54 11° ₹25'20 -2126 Nov 25 j 11:06 16°M 49'01 0°05'21 conjunction behind sun end -2120 Dec 20 j 04:54 11°**尽**28'50 20.89543 AU -2126 Nov 25 j 11:06 16°M 49'01 minimum elong 0°05'19 max. Earth dist. -2126 Nov 25 j 04:47 16°M48'06 -2119 Apr 07 j 09:13 15°**尽**27'20 behind sun begin retrograde -2126 Nov 25 j 17:25 16°M49'56 -2119 Jun 23 j 08:51 13° ₹ 31'04 18.91804 AU behind sun end min. Earth dist. -2126 Nov 26 j 08:32 16°ML52'12 20.55253 AU -2119 Jun 24 j 11:28 13° ₹ 28'25 0°-17'-29 max. Earth dist. opposition -2119 Sep 08 j 16:01 11° ₹31'41 -2125 Mar 13 j 19:23 20° M 54'45 retrograde direct -2125 May 29 j 09:53 18°M 57'31 18.58468 AU min. Earth dist. opposition -2125 May 30 j 07:38 18°ML55'20 0°04'00 conjunction -2119 Dec 23 j 06:57 15° ₹26'41 0°-17'-19 direct -2125 Aug 15 j 02:29 16°M56'46 minimum elong -2119 Dec 23 j 06:56 15° ₹26'41 0°17'23 max. Earth dist. -2119 Dec 24 j 09:50 15° ₹ 30'35 20.93882 AU conjunction -2125 Nov 29 j 18:31 20°ML58'19 0°02'01 retrograde -2118 Apr 11 j 17:34 19° ₹28'44 -2125 Nov 29 j 18:31 20°M 58'19 -2118 Jun 28 j 22:03 17° ₹ 29'48 0°-20'-48 minimum elong opposition behind sun begin -2125 Nov 29 j 11:59 20°M57'23 min. Earth dist. -2118 Jun 27 j 20:16 17° ₹32'23 18.95901 AU behind sun end -2125 Nov 30 j 01:03 20°M 59'16 direct -2118 Sep 12 j 22:55 15° ₹33'15 max. Earth dist. -2125 Nov 30 j 16:35 21°ML01'35 20.61639 AU -2124 Mar 17 j 06:11 25° ML03'25 -2118 Dec 27 i 12:09 19° ₹27'24 0°-20'-16 retrograde conjunction -2124 Jun 02 j 21:59 23°M 04'05 0°00'19 -2118 Dec 27 j 12:08 19° ₹27'24 0°20'20 opposition minimum elong -2124 Jun 01 j 23:36 23° ML06'20 18.64779 AU min. Earth dist. max. Earth dist. -2118 Dec 28 i 15:45 19° 🗷 31'24 20.97728 AU desc. node -2124 Jul 04 j 09:35 21°M 53'17 retrograde -2117 Apr 16 j 02:33 23° ₹ 29'03 direct -2124 Aug 18 j 13:24 21° ML05'53 min. Earth dist. -2117 Jul 02 j 04:49 21° ₹32'47 18.99495 AU opposition -2117 Jul 03 j 07:36 21° ₹ 30'07 0°-24'00 -2124 Dec 03 j 01:30 25°ML06'10 0°-1'-23 direct -2117 Sep 17 j 07:59 19° ₹33'41 conjunction -2124 Dec 03 j 01:28 25°ML06'10 0°01'26 minimum elong behind sun begin -2124 Dec 02 j 18:56 25°M 05'14 conjunction -2117 Dec 31 j 16:52 23° ₹27'04 0°-23'-6 behind sun end -2124 Dec 03 j 08:00 25°M 07'06 minimum elong -2117 Dec 31 j 16:52 23° \$\mathbb{Z}\$\dag{1}27'04 0°23'10 max. Earth dist. -2124 Dec 04 j 01:36 25°M 09'44 20.67846 AU max. Earth dist. -2116 Jan 01 j 20:05 23° ₹ 31'00 21.01079 AU retrograde -2123 Mar 21 j 17:14 29° 11.10'39 retrograde -2116 Apr 19 j 10:12 27°**尽** 28'24 min. Earth dist. -2123 Jun 06 j 11:15 27° ML 13'52 18.70866 AU -2116 Jul 06 j 16:53 25° ₹729'24 0°-27'-4 opposition -2123 Jun 07 j 11:33 27°ML11'26 0°-3'-20 min. Earth dist. -2116 Jul 05 j 15:02 25° ₹31'58 19.02627 AU opposition direct -2116 Sep 20 j 13:52 23° ₹ 33'04 direct -2123 Aug 23 j 01:40 25°M 13'35 conjunction -2123 Dec 07 j 07:58 29°ML12'40 0°-4'-42 conjunction -2115 Jan 03 j 21:23 27° ₹ 25'46 0°-25'-49 minimum elong -2123 Dec 07 j 07:57 29°ML12'40 0°04'46 minimum elong -2115 Jan 03 j 21:23 27° ₹25'46 0°25'53 behind sun begin -2123 Dec 07 j 01:34 29°ML11'45 max. Earth dist. -2115 Jan 05 j 01:23 27°**х** 29'48 21.03994 AU behind sun end -2123 Dec 07 j 14:21 29°ML13'35 -2115 Feb 21 j 08:12 0°궁 max. Earth dist. -2123 Dec 08 j 08:32 29°ML16'16 20.73801 AU retrograde -2115 Apr 23 j 18:33 1°る26'49

-2115 Jun 27 j 10:12 30°R ✓

-2123 Dec 20 j 19:35

0°**∡**7

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min. Earth dist.	-2115 Jul 09 j 22:30	-		opposition	-2107 Aug 12 j 09:15	counting style 1°≈02'53	
opposition	-2115 Jul 09 j 22:30			opposition	-2107 Aug 12 j 03:13 -2107 Sep 08 j 21:29		0 -47 -3
direct	-2115 Sep 24 j 21:26		0 -27-37	direct	-2107 Oct 26 j 12:01	29°る07'01	
uncet	-2115 Dec 14 j 06:54	0°る		direct	-2107 Dec 11 j 11:07	0°≈	
	2113 Dec 14 1 00.54	ů O			2107 Dec 11 j 11.07	0 701	
conjunction	-2114 Jan 08 j 01:47	1° る 23'38	0°-28'-23	conjunction	-2106 Feb 08 j 17:19	2° ≈ 58'15	0°-43'-13
minimum elong	-2114 Jan 08 j 01:47	1° る 23'38	0°28'26	minimum elong	-2106 Feb 08 j 17:19	2° ≈ 58'15	0°43'16
max. Earth dist.	-2114 Jan 09 j 05:24	1° る 27'36	21.06494 AU	max. Earth dist.	-2106 Feb 09 j 17:03	3° ≈ 01'37	21.11941 AU
retrograde	-2114 Apr 28 j 01:38	5° る 24'29		retrograde	-2106 May 30 j 17:00	6° ≈ 59'48	
min. Earth dist.	-2114 Jul 14 j 07:39	3° る 27'58	19.07652 AU	opposition	-2106 Aug 16 j 15:26	5° ≈ 00'32	0°-48'-19
opposition	-2114 Jul 15 j 09:37		0°-32'-45	min. Earth dist.	-2106 Aug 15 j 18:46		19.11270 AU
direct	-2114 Sep 29 j 02:25	1° る 29'12		direct	-2106 Oct 30 j 14:58	3° ≈ 04'35	
conjunction	-2113 Jan 12 j 06:15	5°云20'52	0°-30'-49	conjunction	-2105 Feb 12 j 23:52	6°≈56'07	0°-44'-13
minimum elong	-2113 Jan 12 j 06:15	5° る 20'52		minimum elong	-2105 Feb 12 j 23:52	6° ≈ 56'07	0°44'16
max. Earth dist.	-2113 Jan 13 j 10:27		21.08626 AU	max. Earth dist.	-2105 Feb 13 j 22:33	6° ≈ 59'21	21.10363 AU
retrograde	-2113 May 02 j 10:19	9° ට 21'34		retrograde	-2105 Jun 04 j 02:12	10° ≈ 57'58	
opposition	-2113 Jul 19 j 17:11	7° る 22'25	0°-35'-20	opposition	-2105 Aug 20 j 21:31	8° ≈ 58'37	0°-49'-20
min. Earth dist.	-2113 Jul 18 j 14:14	7° る 25'07	19.09594 AU	min. Earth dist.	-2105 Aug 20 j 01:13	9° ≈ 00'40	19.09387 AU
direct	-2113 Oct 03 j 08:27	5° පි 26'19		direct	-2105 Nov 03 j 20:59	7° ≈ 02'30	
	2112 1 16:10.21	00=17127	00.221.6	. ,.	2104 F 1 17:06 22	10054124	00 451 1
conjunction	-2112 Jan 16 j 10:31 -2112 Jan 16 j 10:31	9°る17'37 9°る17'37		conjunction	-2104 Feb 17 j 06:32 -2104 Feb 17 j 06:32	10°≈54'24	0°-45'-1
minimum elong max. Earth dist.	-2112 Jan 16 j 10:31 -2112 Jan 17 j 14:10		21.10372 AU	minimum elong max. Earth dist.	-2104 Feb 17 J 06:32 -2104 Feb 18 j 03:18		
retrograde	-2112 Jan 17 J 14:10	9 3 21 34	21.10372 AU	retrograde	-2104 Feb 18 j 03:18 -2104 Jun 07 j 09:28	10 ≈5721 14°≈56'36	21.08187 AU
min. Earth dist.	-2112 Jul 21 j 22:47		19.11160 AU	min. Earth dist.	-2104 Aug 23 j 09:48		19.06930 AU
opposition	-2112 Jul 23 j 00:32			opposition	C 3	12°≈57'06	0°-50'-6
direct	-2112 Oct 06 j 12:51	9° る 23'05	0 37 10	direct	-2104 Nov 07 j 00:43		0 20 0
	J				J		
conjunction	-2111 Jan 19 j 15:03	13° る 14'07	0°-35'-13	conjunction	-2103 Feb 20 j 13:51	14° ≈ 53′09	0°-45'-36
minimum elong	-2111 Jan 19 j 15:03	13° る 14'07	0°35'17	minimum elong	-2103 Feb 20 j 13:51	14° ≈ 53′09	0°45'39
max. Earth dist.	-2111 Jan 20 j 19:05		21.11755 AU	max. Earth dist.	-2103 Feb 21 j 09:34	14° ≈ 55'57	21.05478 AU
retrograde	-2111 May 10 j 02:15				3	15° ≈	
min. Earth dist.	-2111 Jul 26 j 04:57			retrograde	-2103 Jun 11 j 18:33		
opposition	-2111 Jul 27 j 07:26		0°-40'-1	opposition	-2103 Aug 28 j 09:38	16° ≈ 56′03	0°-50'-37
direct	-2111 Oct 10 j 18:12	13° る 19'39		min. Earth dist.	-2103 Aug 27 j 16:10		19.03962 AU
	2110 7 22:10.26	150-710100	00.051.11		-2103 Nov 06 j 22:28	•	
conjunction	-2110 Jan 23 j 19:36			direct	-2103 Nov 11 j 06:27		
minimum elong max. Earth dist.	-2110 Jan 23 j 19:36 -2110 Jan 24 j 22:51				-2103 Nov 15 j 13:21	15*₩	
retrograde	-2110 Jan 24 j 22:31 -2110 May 14 j 08:33		21.12/33 AU	conjunction	-2102 Feb 24 j 21:31	18°22'23	0°-45'-58
opposition	-2110 Jul 31 j 14:16		0°-42'-6	minimum elong	·	18°≈52'23	0°46'01
min. Earth dist.	-2110 Jul 30 j 13:21			max. Earth dist.	-2102 Feb 25 j 15:22		
direct	-2110 Oct 14 j 21:40			retrograde	-2102 Jun 16 j 02:18	22° ≈ 55'22	
	, ,			opposition	-2102 Sep 01 j 15:44		0°-50'-54
conjunction	-2109 Jan 28 j 00:36	21° る 07'02	0°-38'-58	min. Earth dist.	-2102 Sep 01 j 00:39		
minimum elong	-2109 Jan 28 j 00:36	21° る 07'02	0°39'01	direct	-2102 Nov 15 j 10:30	18° ≈ 58'45	
max. Earth dist.	-2109 Jan 29 j 03:48	21° ප 10'54	21.13288 AU				
retrograde	-2109 May 18 j 18:08			conjunction	-2101 Mar 01 j 05:46		0°-46'-6
opposition	-2109 Aug 04 j 20:33			minimum elong	-2101 Mar 01 j 05:46	22° ≈ 52'14	0°46'09
min. Earth dist.	-2109 Aug 03 j 19:24		19.13434 AU	max. Earth dist.	-2101 Mar 01 j 22:30		20.98643 AU
direct	-2109 Oct 19 j 03:13	21° 七 12'52		retrograde	-2101 Jun 20 j 11:52		
				opposition	-2101 Sep 05 j 21:39		0°-50'-56
conjunction	-2108 Feb 01 j 05:45			min. Earth dist.	-2101 Sep 05 j 06:59		18.96706 AU
minimum elong	-2108 Feb 01 j 05:45			direct	-2101 Nov 19 j 16:24	22° ≈ 58'38	
max. Earth dist. retrograde	-2108 Feb 02 j 07:43 -2108 May 22 j 00:37		41.13303 AU	conjunction	-2100 Mar 04 j 14:29	26°2252151	0° - 46'-1
min. Earth dist.	-2108 May 22 j 00.37 -2108 Aug 07 j 03:50		19 13264 ATT	minimum elong	-2100 Mar 04 j 14:29	26°≈52'51	0°46'03
opposition	-2108 Aug 07 j 03:30 -2108 Aug 08 j 03:02			max. Earth dist.	-2100 Mar 04 j 14.29 -2100 Mar 05 j 05:25		20.94633 AU
direct	-2108 Oct 22 j 05:53			Darm dist.	-2100 May 05 j 18:44	0° ∺	20., 1033 110
	2100 000 22 1 00.55	20 00747		retrograde	-2100 Jun 23 j 20:09	0° ¥ 56'50	
conjunction	-2107 Feb 04 j 11:17	29° る 00'48	0°-41'-59		-2100 Aug 13 j 00:22	30°R≈	
minimum elong	-2107 Feb 04 j 11:17	29° る 00'48		opposition	-2100 Sep 09 j 03:56	28°≈56'39	0°-50'-44
max. Earth dist.	-2107 Feb 05 j 12:47		21.12938 AU	min. Earth dist.	-2100 Sep 08 j 15:35		18.92530 AU
	-2107 Feb 21 j 23:32	0° ≈		direct	-2100 Nov 22 j 20:31	26° ≈ 59′21	
retrograde	-2107 May 26 j 10:02	3° ≈ 02'05			-2099 Feb 21 j 00:04	0° ∀	
min. Earth dist.	-2107 Aug 11 j 10:11	1° ≈ 05'12	19.12557 AU				

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2099 in astronomical counting style is the year 2100 BCE in historical counting style. -2099 Mar 08 j 23:48 0°**)** 54'22 0°-45'-42 3°Υ58'50 0°-35'-3 conjunction -2091 Apr 12 j 08:03 conjunction minimum elong -2099 Mar 08 i 23:48 0°¥54'22 0°45'45 -2091 Apr 12 j 08:03 3°Y58'50 0°35'03 minimum elong max. Earth dist. -2099 Mar 09 j 13:31 0°¥56'19 20.90309 AU max. Earth dist. -2091 Apr 12 j 04:34 3°**Υ**58'20 20.44890 AU -2099 Jun 28 j 07:06 4°**)**₹58'56 -2091 Aug 01 j 11:33 8°Y09'46 retrograde retrograde -2091 Oct 16 j 03:43 6°Υ08'33 0°-37'-34 -2099 Sep 13 j 10:16 2°**升**58'37 0°-50'-16 opposition opposition -2099 Sep 12 j 22:25 2°**升**59'50 18.88045 AU -2091 Oct 16 j 06:53 6°**Y**08'13 18.41375 AU min. Earth dist. min. Earth dist. -2099 Nov 27 j 02:56 -2091 Dec 29 j 16:55 4°Υ08'29 direct 1°**₩**01'02 direct -2098 Mar 13 j 09:55 4°****56'59 0°-45'-10 -2090 Apr 17 j 01:09 8°Y14'40 0°-32'-43 conjunction conjunction -2098 Mar 13 j 09:55 -2090 Apr 17 j 01:09 minimum elong 4°**¥**56'59 0°45'11 minimum elong 8°Υ14'40 0°32'44 -2090 Apr 16 j 19:39 max. Earth dist. -2098 Mar 13 j 21:43 4°**¥**58'40 20.85671 AU max. Earth dist. 8°**Y**13'52 20.37825 AU -2098 Jul 02 j 16:09 9°**₩**02'12 -2090 Aug 06 j 01:23 12°**Y**26′26 retrograde retrograde -2098 Sep 17 j 16:55 -2090 Oct 20 j 14:11 10°**Υ**25'03 0°-34'-53 opposition 7°**)**€01'46 0°-49'-33 opposition -2090 Oct 20 j 19:57 min. Earth dist. -2098 Sep 17 j 07:31 7°**¥**02'44 18.83263 AU min. Earth dist. 10°**Y**°24′27 18.34205 AU direct -2098 Dec 01 j 07:35 5°**₩**03'55 direct -2089 Jan 03 j 02:35 8°**Y**24'33 conjunction -2097 Mar 17 j 20:47 9°**)** € 00'52 0°-44'-24 conjunction -2089 Apr 21 j 18:58 12°**Y**32'13 0°-30'-12 minimum elong -2097 Mar 17 j 20:47 9°**升**00'52 0°44'26 minimum elong -2089 Apr 21 j 18:58 12°**Y**32'13 max. Earth dist. -2097 Mar 18 j 07:02 9°**升**02'20 20.80763 AU max. Earth dist. -2089 Apr 21 j 10:39 12°**Υ**'31'00 20.30587 AU retrograde -2097 Jul 07 j 04:25 13° **¥** 06'48 retrograde -2089 Aug 10 j 18:20 16°**Υ**'44'52 opposition -2097 Sep 21 j 23:52 11° **★**06'16 0°-48'-36 opposition $-2089 \text{ Oct } 25 \text{ j } 01:13 \quad 14^{\circ} \Upsilon 43'17$ min. Earth dist. -2097 Sep 21 j 15:09 11°\(\frac{1}{2}\)07'10 18.78209 AU min. Earth dist. $-2089 \text{ Oct } 25 \text{ j } 08:17 \quad 14^{\circ} \Upsilon 42'32 \quad 18.26905 \text{ AU}$ direct -2097 Dec 05 i 14:42 9°**)** 08'10 direct -2088 Jan 07 j 15:31 12°**Y**42'18 conjunction -2096 Mar 21 i 08:14 13° **\(\)** 06'14 0°-43'-25 conjunction -2088 Apr 25 i 13:33 16°**Υ**'51'31 0°-27'-30 -2096 Mar 21 i 08:14 13°\mathcal{H} 06'14 0°43'27 minimum elong -2088 Apr 25 j 13:33 16° Υ 51'31 0°27'29 minimum elong max. Earth dist. -2096 Mar 21 j 16:35 13° \(\) 407'25 20.75566 AU max. Earth dist. -2088 Apr 25 j 03:49 16° Υ 50'06 20.23237 AU retrograde -2096 Jul 10 j 14:43 17° **)** 12'55 retrograde -2088 Aug 14 j 09:13 21°**Υ**'05'02 -2096 Sep 25 j 07:23 15° **¥** 12'18 0°-47'-23 -2088 Oct 28 j 12:58 19° Υ 03'15 0°-28'-55 opposition opposition -2096 Sep 25 j 01:14 15° H 12'56 18.72867 AU -2088 Oct 28 j 22:13 19° Υ 02'16 18.19533 AU min. Earth dist. min. Earth dist. -2096 Dec 08 j 20:26 13°**光** 13'57 -2087 Jan 11 j 02:53 17°**Y**01'49 direct direct -2095 Mar 25 j 20:47 17° **₭** 13'12 0°-42'-12 -2087 Apr 30 j 09:02 21°**Υ**12'36 0°-24'-37 conjunction conjunction -2095 Mar 25 j 20:47 17° **升** 13'12 0°42'13 -2087 Apr 30 j 09:02 21°**Υ**12'36 0°24'37 minimum elong minimum elong -2087 Apr 29 j 20:31 21°Υ10'45 20.15873 AU max. Earth dist. max. Earth dist. -2087 Aug 19 j 02:54 25°**Y**26'59 retrograde retrograde -2095 Sep 29 j 15:05 19°**米**20'00 0°-45'-55 -2087 Nov 02 j 01:09 23°**Υ**25'01 0°-25'-38 opposition opposition min. Earth dist. -2095 Sep 29 j 10:00 19° **¥** 20'32 18.67235 AU min. Earth dist. -2087 Nov 02 j 11:44 23°**Υ**23'52 18.12188 AU direct -2095 Dec 13 j 04:34 17°**米**21'23 direct -2086 Jan 15 j 17:29 21°**Y**23'06 -2086 May 05 j 05:31 25° Υ 35'30 0°-21'-34 conjunction conjunction -2094 Mar 30 j 10:18 21° **€**21'56 0°40'47 minimum elong -2086 May 05 j 05:31 25° Υ 35'30 0°21'34 minimum elong max. Earth dist. max. Earth dist. -2086 May 04 j 15:58 25°**Y**33'30 20.08549 AU retrograde -2094 Jul 19 j 15:58 25°**₭**30'16 retrograde -2086 Aug 23 j 18:52 29°**Y**50'44 -2094 Oct 03 j 23:31 23°**)** 29'29 0°-44'-12 -2086 Nov 06 j 14:16 27°**Υ**48'37 0°-22'-11 opposition opposition -2094 Oct 03 j 21:15 23° \(29'43 \) 18.61266 AU -2086 Nov 07 j 02:37 27°**Υ**47'17 18.04916 AU min. Earth dist. min. Earth dist. -2094 Dec 17 j 11:36 21° ¥ 30'34 -2085 Jan 20 j 07:04 25°**Υ**46'17 direct direct -2085 May 09 j 10:14 29° γ'57'52 20.01349 AU max. Earth dist. -2093 Apr 04 i 00:38 25° \(\frac{1}{32} \) 32'26 0°-39'-4 conjunction minimum elong -2093 Apr 04 i 00:38 25° ¥ 32'26 0°39'04 conjunction -2085 May 10 i 02:29 0°800'17 0°-18'-24 -2093 Apr 04 i 02:16 25° ★ 32'40 20.58161 AU max. Earth dist. minimum elong -2085 May 10 i 02:29 0°800'17 0°18'23 retrograde -2093 Jul 24 j 06:35 29° **)** 41'38 -2085 May 10 i 00:33 0°8 -2093 Oct 08 j 08:19 27° ¥40'45 0°-42'-14 retrograde -2085 Aug 28 j 13:08 4°816'24 opposition -2093 Oct 08 j 07:20 27° **★** 40'51 18.54957 AU -2085 Nov 11 j 04:01 min. Earth dist. opposition 2°814'08 0°-18'-35 direct -2093 Dec 21 j 21:17 25° **X** 41'29 min. Earth dist. -2085 Nov 11 j 17:34 2°812'40 17.97806 AU direct -2084 Jan 24 j 22:59 0°811'22 conjunction -2092 Apr 07 j 15:55 29° **)** 44'45 0°-37'-10 max. Earth dist. -2084 May 13 j 07:43 4°**8**24'31 19.94324 AU minimum elong 4°**8**27'02 0°-15'-5 max. Earth dist. -2092 Apr 07 j 15:16 29°**)** 44'39 20.51677 AU -2084 May 14 j 00:34 conjunction $0^{\circ}\Upsilon$ -2092 Apr 12 j 00:53 -2084 May 14 j 00:34 4°**8**27'02 0°15'05 minimum elong -2092 Jul 27 j 19:31 3°**Y**54'49 -2084 May 13 j 22:36 4°**8**26'44 retrograde behind sun begin 4°**8**27'19 opposition -2092 Oct 11 j 17:48 1°**Υ**53'47 0°-40'-1 behind sun end -2084 May 14 j 02:33 1°**Υ**53'35 18.48310 AU min. Earth dist. -2092 Oct 11 j 19:34 retrograde -2084 Sep 01 j 06:55 8°**8**43'59 -2092 Dec 10 j 07:18 30°R₩ opposition -2084 Nov 14 j 18:31 6°**8**41'38 0°-14'-51

min. Earth dist.

direct

-2084 Nov 15 j 09:31

-2083 Jan 28 j 15:03

6°**8**40'01 17.90883 AU

4°**8**38'30

direct

-2092 Dec 25 j 05:32 29° **★** 54'08

 $0^{\circ}\Upsilon$

-2091 Jan 09 j 03:00

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2083 in astronomical counting style is the year 2084 BCE in historical counting style. -2083 May 18 j 23:26 8°**8**55'48 0°-11'-40 conjunction -2077 Jun 17 j 09:22 6°**I**30'53 0°10'17 conjunction -2083 May 18 j 23:26 8°**8**55'48 minimum elong -2077 Jun 17 j 09:21 6°**Ⅲ**30'53 0°10'19 minimum elong 0°11'38 -2083 May 18 j 18:43 8°855'07 -2077 Jun 17 j 04:03 6°**Ⅲ**30′05 behind sun begin behind sun begin -2083 May 19 j 04:10 8°**8**56'30 -2077 Jun 17 j 14:40 behind sun end behind sun end 6°**Ⅲ**31'41 -2083 May 18 j 03:47 8°**8**52'51 19.87518 AU -2077 Oct 04 j 11:19 10° **I**53'01 max. Earth dist. retrograde -2083 Sep 06 j 02:05 13°**8**13'38 -2077 Dec 17 j 00:07 retrograde opposition 8°**П**50'26 0°13'26 -2083 Nov 19 j 09:53 11°**8**11'13 0°-10'-59 -2077 Dec 18 j 00:25 opposition min. Earth dist. 8°**Д**47'47 17.48738 AU min. Earth dist. -2083 Nov 20 j 02:18 11°**8**09'26 17.84195 AU direct -2076 Mar 01 j 12:11 6°**Ⅱ**44'56 -2076 Jun 20 j 08:15 11°**Ц**08'18 19.46205 AU -2082 Feb 02 j 08:19 max. Earth dist. direct 9°**8**07'43 conjunction -2082 May 23 j 23:18 13°**8**26'41 0°-8'-9 conjunction -2076 Jun 21 j 13:04 11°**II**12'46 0°13'54 -2082 May 23 j 23:18 13°**8**26'41 -2076 Jun 21 j 13:04 11° **II** 12'46 0°13'57 minimum elong 0°08'08 minimum elong -2082 May 23 j 17:18 13°**8**25'48 -2076 Jun 21 j 09:47 11°**Ⅲ**12'16 behind sun begin behind sun begin -2076 Jun 21 j 16:20 11°**Ⅲ**13'15 behind sun end -2082 May 24 j 05:18 13°**8**27'34 behind sun end max. Earth dist. -2082 May 23 j 03:13 13°**8**23'39 19.80932 AU retrograde -2076 Oct 08 j 11:20 15°**耳**35'23 -2082 Jun 19 j 05:22 15°**8** opposition -2076 Dec 20 j 21:03 13°**I**32'46 retrograde -2082 Sep 10 j 22:05 17°**8**45'20 min. Earth dist. -2076 Dec 21 j 21:17 13°**Ц**30'07 17.43816 AU opposition -2082 Nov 24 j 02:04 15°842'54 0°-7'-1 direct -2075 Mar 06 j 12:32 11°**Д**26'56 min. Earth dist. -2082 Nov 24 j 19:42 15°840'59 17.77719 AU max. Earth dist. -2075 Jun 25 j 11:10 15°**Д**51'18 19.41482 AU -2082 Dec 10 j 21:29 15°R8 direct -2081 Feb 07 j 02:45 13°839'05 conjunction -2075 Jun 26 j 17:06 15°**II**55'57 0°17'27 -2081 Apr 04 i 19:01 15°8 minimum elong -2075 Jun 26 j 17:06 15°**I**I55'57 retrograde -2075 Oct 13 j 10:25 20° II 19'01 conjunction -2081 May 28 i 23:51 17°\(259'40\) 0°-4'-33 opposition -2075 Dec 25 j 18:57 18° **II** 16'20 0°21'20 -2081 May 28 j 23:51 17°**8**59'40 0°04'31 min. Earth dist. -2075 Dec 26 j 20:41 18° **II** 13'31 17.39328 AU minimum elong -2081 May 28 i 17:11 17°858'41 direct -2074 Mar 11 j 11:52 16°**Ⅲ**10'13 behind sun begin -2081 May 29 j 06:30 18°800'39 behind sun end -2081 May 28 j 00:58 17° \(\begin{aligned}
 56'12 19.74570 AU \) -2074 Jul 01 j 21:12 20°**Д**40'17 0°20'53 max. Earth dist. conjunction -2081 Sep 15 j 18:27 22°819'08 -2074 Jul 01 j 21:12 20°**Ⅱ**40'17 0°20'55 retrograde minimum elong -2081 Nov 28 j 19:10 20°816'41 0°-2'-58 -2074 Jun 30 j 15:07 20° **II**35'36 19.37232 AU opposition max. Earth dist. -2074 Oct 18 j 11:02 25°**Ⅲ**03'43 -2081 Nov 29 j 14:31 20°**8**14'35 17.71477 AU min. Earth dist. retrograde -2080 Feb 11 j 21:36 18°**8**12'31 -2074 Dec 30 j 17:22 23°**Д**01'00 0°25'06 opposition direct -2080 Jun 01 j 01:57 22°831'10 19.68423 AU -2074 Dec 31 j 18:22 22°**Ц**58'15 17.35335 AU max. Earth dist. min. Earth dist. -2073 Mar 16 j 13:59 20°**I** 54'36 direct -2073 Jul 05 j 19:33 25°**Д**20'56 19.33507 AU conjunction max. Earth dist. -2080 Jun 02 j 01:16 22°**8**34'43 0°00'49 minimum elong -2073 Jul 07 j 01:33 25°**Ⅲ**25'37 0°24'11 -2080 Jun 01 j 18:29 22°**8**33'42 behind sun begin conjunction -2080 Jun 02 j 08:03 22°**8**35'43 behind sun end minimum elong -2073 Jul 07 j 01:32 25°**Ⅲ**25'37 asc. node -2080 Aug 24 j 15:32 26°836'27 retrograde -2073 Oct 23 j 10:10 29°**II**49'20 retrograde -2080 Sep 19 j 16:22 26°**8**54'56 opposition -2072 Jan 04 j 16:31 27°**Ц**46'36 0°28'42 min. Earth dist. -2072 Jan 05 j 18:33 27°**Ц**43'44 17.31914 AU opposition min. Earth dist. -2080 Dec 03 j 09:26 24°850'15 17.65429 AU -2072 Mar 20 j 14:28 25°**Ⅲ**39'59 direct -2079 Feb 15 j 18:23 22°847'59 -2072 Jul 08 j 02:35 0ಂತಾ direct max. Earth dist. -2079 Jun 06 j 01:23 27°**8**07'43 19.62475 AU max. Earth dist. -2072 Jul 09 j 23:43 0°907'05 19.30393 AU -2079 Jun 07 i 03:26 27°**8**11'42 0°02'56 -2072 Jul 11 i 05:51 conjunction conjunction 0°9511'49 0°27'19 -2079 Jun 07 i 03:25 27°**8**11'42 minimum elong minimum elong -2072 Jul 11 i 05:51 0°9511'49 0°27'22 -2079 Jun 06 i 20:39 27°**8**10'41 -2072 Oct 27 i 10:50 behind sun begin retrograde 4°935'45 behind sun end -2079 Jun 07 i 10:11 27°**8**12'42 opposition -2071 Jan 08 j 16:11 2°533'01 0°32'07 -2079 Jul 26 i 14:27 $\Pi^{\circ}0$ min. Earth dist. -2071 Jan 09 i 17:00 2°530'18 17.29116 AU -2079 Sep 24 j 13:43 1°**Ⅱ**32'37 direct -2071 Mar 25 j 18:08 0°926'15 retrograde -2079 Nov 25 i 19:26 30°R8 max. Earth dist. -2071 Jul 15 j 05:17 4°554'12 19.27913 AU -2079 Dec 07 j 07:58 29°\(\mathbf{3}\)30'08 0°05'14 opposition min. Earth dist. -2079 Dec 08 j 06:08 29°827'42 17.59604 AU conjunction -2071 Jul 16 j 10:22 4°958'46 0°30'17 direct -2078 Feb 20 j 15:06 27°825'17 minimum elong -2071 Jul 16 j 10:21 4°958'46 0°30'20 -2078 May 12 j 09:40 $0^{\circ}\Pi$ retrograde -2071 Nov 01 j 10:19 9°522'51 max. Earth dist. -2078 Jun 11 j 03:47 1°**Д**46'25 19.56761 AU opposition -2070 Jan 13 j 16:35 7°**©**20'11 0°35'19 -2070 Jan 14 j 17:55 7°517'25 17.26978 AU min. Earth dist. -2078 Jun 12 j 06:18 1°**Ⅱ**50'29 0°06'38 -2070 Mar 30 j 20:23 conjunction direct 5°9513'20 -2078 Jun 12 j 06:17 1°**I**I50′29 0°06'40 -2070 Jul 20 j 09:28 9°5541'48 19.26124 AU minimum elong max. Earth dist. -2078 Jun 11 j 23:58 1°**Ⅱ**49'32 behind sun begin behind sun end -2078 Jun 12 j 12:37 1°**I**I51′26 conjunction -2070 Jul 21 j 14:40 9°**5**46'24 0°33'03 retrograde -2078 Sep 29 j 12:57 6°**Ⅲ**12′02 minimum elong -2070 Jul 21 j 14:39 9°9546'24 0°33'05 opposition -2078 Dec 12 j 03:38 4°**Ⅱ**09'30 0°09'21 retrograde -2070 Nov 06 j 11:16 14°510'35 min. Earth dist. -2078 Dec 13 j 02:13 4°**Ⅲ**07'02 17.54017 AU opposition -2069 Jan 18 j 17:24 12°508'00 -2077 Feb 25 j 13:55 2°II04'20 min. Earth dist. -2069 Jan 19 j 17:17 12°505'23 17.25529 AU direct max. Earth dist. -2077 Jun 16 j 04:52 6°**Ⅲ**26'29 19.51312 AU -2069 Apr 05 j 01:16 10°501'08 direct

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2069 in astronomical counting style is the year 2070 BCE in historical counting style. -2069 Jul 26 j 18:52 14°534'37 0°35'35 min. Earth dist. -2061 Feb 27 i 06:11 $20^{\circ}\Omega$ 30'48 17.34667 AU conjunction -2069 Jul 26 j 18:52 14°534'37 0°35'37 direct -2061 May 14 j 12:48 18° **Ω**26'37 minimum elong -2069 Jul 25 j 15:34 14°530'18 19.25005 AU max. Earth dist. -2069 Nov 11 j 11:20 18°558'49 -2061 Sep 03 j 15:47 22° Ω57'38 0°45'54 retrograde conjunction -2061 Sep 03 j 15:47 22° Ω57'38 0°45'56 -2068 Jan 23 j 18:53 16°556'22 0°40'59 opposition minimum elong -2061 Sep 02 j 22:34 22°**Q**54'55 19.36282 AU min. Earth dist. -2068 Jan 24 j 18:54 16°553'45 17.24734 AU max. Earth dist. -2061 Dec 19 j 16:34 27°**Ω**19'00 -2068 Apr 09 j 04:34 14°549'32 direct retrograde -2060 Mar 02 j 16:05 25°Ω17'26 0°51'10 opposition conjunction -2068 Jul 30 j 22:56 19°\$23'17 0°37'53 min. Earth dist. -2060 Mar 03 j 06:32 25°Ω15'53 17.38070 AU minimum elong -2068 Jul 30 j 22:56 19°523'17 0°37'56 direct -2060 May 18 j 18:52 $23^{\circ}\Omega$ 11'39 max. Earth dist. -2068 Jul 29 j 19:25 19°518'56 19.24534 AU -2068 Nov 15 j 12:49 23°547'25 -2060 Sep 07 j 15:21 27° **Ω**41'40 0°45'48 retrograde conjunction -2067 Jan 27 j 20:33 21°5945'07 -2060 Sep 07 j 15:21 27° **Ω**41'40 0°45'49 opposition 0°43'25 minimum elong -2060 Sep 07 j 00:02 27°Ω39'15 19.39941 AU min. Earth dist. -2067 Jan 28 j 19:21 21°5642'38 17.24569 AU max. Earth dist. direct -2067 Apr 14 j 09:36 19°538'20 -2060 Oct 15 j 22:18 0° m max. Earth dist. -2067 Aug 04 j 01:34 24°508'12 19.24658 AU retrograde -2060 Dec 23 j 13:36 2°m/02'21 opposition -2059 Mar 07 j 18:38 0° Mp 00'51 0°50'52 conjunction -2067 Aug 05 j 02:56 24°512'13 0°39'55 min. Earth dist. -2059 Mar 08 j 08:03 29° **Ω**59'25 17.41992 AU minimum elong -2067 Aug 05 j 02:56 24°512'13 -2059 Mar 08 j 02:33 30°RΩ 27°**Ω**55'17 retrograde -2067 Nov 20 j 13:50 28°536'12 direct -2059 May 23 j 21:47 opposition -2066 Feb 01 j 22:58 26°534'03 0°45'32 -2059 Aug 03 j 09:53 min. Earth dist. -2066 Feb 02 j 21:27 26°531'37 17.24972 AU direct -2066 Apr 19 j 13:41 24°527'22 conjunction -2059 Sep 12 i 14:00 2° m 24'12 0°45'24 max. Earth dist. -2066 Aug 09 j 04:56 28°557'08 19.25339 AU minimum elong -2059 Sep 12 i 14:00 2° m 24'12 0°45'24 max. Earth dist. -2059 Sep 12 i 00:54 2° m 22'08 19.44135 AU -2066 Aug 10 j 06:19 29°501'10 0°41'41 retrograde -2059 Dec 28 j 12:46 6° m 44'09 conjunction -2066 Aug 10 j 06:19 29°501'10 0°41'44 -2058 Mar 12 j 20:53 4° m 42'45 0° 50'14 minimum elong opposition -2066 Aug 25 j 19:59 -2058 Mar 13 j 07:12 4° Mp 41'39 17.46443 AU 0 $^{\circ}\Omega$ min. Earth dist. -2066 Nov 25 j 15:16 -2058 May 29 j 03:10 2° m 37'28 retrograde 3°**Ω**24'56 direct 1°**Ω**22'55 0°47'21 opposition -2065 Feb 07 j 01:36 -2065 Feb 07 j 22:55 1°**Ω**20'36 17.25927 AU -2058 Sep 17 j 11:39 7° m 05'09 0°44'41 min. Earth dist. conjunction -2065 Mar 13 j 19:55 30°Rூ -2058 Sep 17 j 11:39 7° m 05'09 0°44'42 minimum elong direct -2065 Apr 24 j 18:09 29°5016'19 -2058 Sep 17 j 01:16 7° Mp 03'31 19.48855 AU max. Earth dist. -2065 Jun 04 j 18:06 0°**Ω** -2057 Jan 02 j 08:38 11° Mp 24'23 retrograde max. Earth dist. 3°**Ω**46'14 19.26549 AU -2065 Aug 14 j 10:23 -2057 Mar 17 j 22:53 9° m 23'05 0°49'16 opposition -2057 Mar 18 j 07:57 9° m/22'07 17.51432 AU min. Earth dist. 7° TO 18'08-2065 Aug 15 j 09:31 3°**Ω**49'54 0°43'09 -2057 Jun 03 j 04:45 conjunction direct minimum elong -2065 Aug 15 j 09:31 3°**Ω**49'54 0°43'11 retrograde -2065 Nov 30 j 16:34 8°**Ω**13'20 conjunction -2057 Sep 22 j 08:29 11° mp 44'32 0°43'41 opposition -2064 Feb 12 j 04:22 6°Ω11'26 0°48'49 minimum elong -2057 Sep 22 j 08:29 11° m/44'32 0°43'41 min. Earth dist. -2064 Feb 13 j 00:47 6°**Ω**09'14 17.27380 AU max. Earth dist. -2057 Sep 22 j 00:02 11° m 43'13 19.54112 AU -2064 Apr 28 j 23:01 4°**Ω**04'58 retrograde -2056 Jan 07 j 06:50 16° M 02'59 direct -2056 Mar 22 j 00:08 14° M 01'50 0°48'00 opposition -2064 Aug 19 j 12:08 8°**Ω**38'09 0°44'19 min. Earth dist. -2056 Mar 22 j 05:56 14° M 01'14 17.56923 AU conjunction -2064 Aug 19 j 12:08 8°**Ω**38'09 0°44'21 direct -2056 Jun 07 j 08:04 11° Mp 57'17 minimum elong -2064 Aug 18 j 13:17 8°**Ω**34'32 19.28252 AU max. Earth dist. -2064 Dec 04 i 16:53 13° Ω 01'11 -2056 Sep 26 j 04:32 16° m 22'20 0°42'25 retrograde conjunction -2063 Feb 16 j 07:22 $10^{\circ}\Omega$ 59'23 $0^{\circ}49'56$ -2056 Sep 26 j 04:32 16° m 22'20 0°42'26 opposition minimum elong -2063 Feb 17 j 02:48 10° Ω 57'17 17.29330 AU -2056 Sep 25 j 23:07 16° m 21'29 19.59838 AU min. Earth dist. max. Earth dist. direct -2063 May 04 j 03:05 8°Ω53'03 retrograde -2055 Jan 11 i 02:04 20° m 39'59 opposition -2055 Mar 27 j 01:19 18° mp 39'02 0°46'25 -2063 Aug 24 j 14:08 $13^{\circ}\Omega$ 25'41 $0^{\circ}45'10$ min. Earth dist. -2055 Mar 27 j 05:56 18° Mp 38'33 17.62863 AU conjunction -2063 Aug 24 j 14:08 $13^{\circ}\Omega$ 25'41 $0^{\circ}45'12$ direct -2055 Jun 12 j 08:19 16° m 34'54 minimum elong -2063 Aug 23 j 17:35 13°**Q**22'25 19.30444 AU max. Earth dist. -2063 Sep 18 j 20:56 15°Ωconjunction -2055 Sep 30 j 23:25 20° m 58'31 0°40'53 retrograde -2063 Dec 09 j 17:51 $17^{\circ}\Omega$ 48'13 minimum elong -2055 Sep 30 j 23:25 20° m 58'31 0°40'53 opposition -2062 Feb 21 j 10:25 $15^{\circ}\Omega$ 46'31 $0^{\circ}50'42$ max. Earth dist. -2055 Sep 30 j 19:39 20° m 57'56 19.65985 AU -2054 Jan 15 j 23:25 25° m 15'22 min. Earth dist. -2062 Feb 22 j 04:10 $15^{\circ}\Omega$ 44'36 17.31748 AU retrograde -2062 Mar 11 j 21:04 15°RΩ -2054 Apr 01 j 01:55 23° Mp 14'36 opposition 0°44'33 -2062 May 09 j 09:07 13°**Ω**40'21 -2054 Apr 01 j 03:17 23° Mp 14'28 17.69179 AU direct min. Earth dist. -2062 Jul 04 j 12:15 15°**Ω** -2054 Jun 17 j 09:14 21° Mp 10'56 direct conjunction -2062 Aug 29 j 15:23 18°Ω12'15 0°45'41 conjunction -2054 Oct 05 j 17:40 25° m 33'04 0°39'05 minimum elong -2062 Aug 29 j 15:23 $18^{\circ}\Omega$ 12'15 0°45'43 minimum elong -2054 Oct 05 j 17:40 25° m 33'04 0°39'06 max. Earth dist. -2062 Aug 28 j 19:55 18° **Ω**09'10 19.33111 AU max. Earth dist. -2054 Oct 05 j 17:06 25° m 32'59 19.72458 AU -2062 Dec 14 j 16:25 22° **Q**34'15 -2053 Jan 20 j 18:06 29° Mp 49'04 retrograde retrograde

opposition

-2053 Apr 06 j 02:02 27° Mp 48'30 0°42'24

-2061 Feb 26 j 13:23 20° **Q**32'36 0°51'07

opposition

A 44 4:	.;	2052	: 4 : 1	4:4! - :- 41	2054 DCE in historical a		age 24
min. Earth dist.	nical year style is used: Tl -2053 Apr 06 j 02:18	-		min. Earth dist.			18.31044 AU
direct	-2053 Apr 00 j 02.18 -2053 Jun 22 j 08:09		17.73787 AU	opposition	-2045 May 12 j 11:44 -2045 May 13 j 02:37	3°M09'43	
direct	-2053 Juli 22 j 08:09 -2053 Oct 08 j 20:58	0° ⊡		direct	-2045 Jul 29 j 04:42	1°M09'39	0 1801
	-2033 Oct 08 j 20.38	0 ==		direct	-2045 Jul 29 J 04.42	1 1160939	
conjunction	-2053 Oct 10 j 10:51	0° ჲ 05'53	0°37'04	conjunction	-2045 Nov 13 j 21:12	5°M17'06	0°14'40
minimum elong	-2053 Oct 10 j 10:51	0° ჲ 05'53	0°37'04	minimum elong	-2045 Nov 13 j 21:13	5° ™ 17'06	0°14'38
max. Earth dist.	-2053 Oct 10 j 11:25	0° ჲ 05'59	19.79185 AU	behind sun begin	-2045 Nov 13 j 18:14	5° ™ 16'40	
retrograde	-2052 Jan 25 j 14:35	4° £ 21'02		behind sun end	-2045 Nov 14 j 00:11	5° M 17′33	
opposition	-2052 Apr 10 j 01:30	2° ≏ 20'40	0°40'00	max. Earth dist.	-2045 Nov 14 j 12:41	5° ™ 19'26	20.34459 AU
min. Earth dist.	-2052 Apr 09 j 22:53	2° ≏ 20'56	17.82602 AU	retrograde	-2044 Feb 29 j 20:09	9°M25'10	
direct	-2052 Jun 26 j 07:04	0° ჲ 17'54		opposition	-2044 May 16 j 20:08	7°M25'26	0°14'25
				min. Earth dist.	-2044 May 16 j 03:33		18.37855 AU
conjunction	-2052 Oct 14 j 03:18	4° £ 36'55	0°34'49	direct	-2044 Aug 01 j 20:00	5°M25'43	
minimum elong	-2052 Oct 14 j 03:18	4° ≏ 36'55	0°34'48				
max. Earth dist.	-2052 Oct 14 j 06:56		19.86067 AU	conjunction	-2044 Nov 17 j 06:42	9° ™ 31'39	0°11'25
retrograde	-2051 Jan 29 j 08:03	8° ≏ 51'11		minimum elong	-2044 Nov 17 j 06:41	9°M31'39	0°11'24
opposition	-2051 Apr 15 j 00:33	6° £ 50'58		behind sun begin	-2044 Nov 17 j 01:52	9°M30'57	
min. Earth dist.	-2051 Apr 14 j 20:47		17.89535 AU	behind sun end	-2044 Nov 17 j 11:31	9°M32'21	20 41240 477
direct	-2051 Jul 01 j 05:29	4° £ 48'41		max. Earth dist.	-2044 Nov 18 j 01:01		20.41248 AU
aaniumatian	2051 Oat 10:10:47	09 0 06102	0022122	retrograde	-2043 Mar 05 j 08:25	13°M38'55	0010147
conjunction	-2051 Oct 18 j 18:47 -2051 Oct 18 j 18:47	9° ₽ 06'03	0°32'22	opposition	-2043 May 21 j 12:50	11°M39'16	
minimum elong max. Earth dist.	-2051 Oct 18 j 18:47	9° ₽ 06'03	0°32'22 19.93045 AU	min. Earth dist.	-2043 May 20 j 18:12 -2043 Aug 06 j 11:53	9°M39'57	18.44619 AU
retrograde	-2050 Feb 03 j 03:18	13° £ 19'26	19.93043 AU	direct	-2043 Aug 00 J 11.33	9 1163937	
opposition	-2050 Apr 19 j 22:51	13 ⊆ 1920 11° ⊆ 19'21	0°34'32	conjunction	-2043 Nov 21 j 15:25	13°M.44'23	0°08'08
min. Earth dist.	-2050 Apr 19 j 16:31		17.96538 AU	minimum elong	-2043 Nov 21 j 15:26		0°08'06
direct	-2050 Jul 06 j 03:09	9° £ 17'28	17.70336 AC	behind sun begin	-2043 Nov 21 j 19:20		0 00 00
ancet	2000 341 00 3 00.07	7 -1720		behind sun end	-2043 Nov 21 j 21:16		
conjunction	-2050 Oct 23 j 09:28	13° ≏ 33'12	0°29'45	max. Earth dist.	-2043 Nov 22 j 10:33		20.47984 AU
minimum elong	-2050 Oct 23 j 09:28				-2043 Dec 13 j 01:19		
max. Earth dist.	-2050 Oct 23 j 16:52			retrograde	-2042 Mar 09 j 20:29		
retrograde	-2049 Feb 07 j 19:20	17° ≏ 45'41		min. Earth dist.	-2042 May 25 j 08:54		18.51326 AU
opposition	-2049 Apr 24 j 20:29	15° ≏ 45'42	0°31'30	opposition	-2042 May 26 j 04:46	15°M51'23	0°07'06
min. Earth dist.	-2049 Apr 24 j 12:56	15° ≏ 46'29	18.03523 AU		-2042 Jun 17 j 03:16	15°RM	
direct	-2049 Jul 11 j 00:39	13° ≏ 44'15		direct	-2042 Aug 11 j 00:42	13°M52'26	
					-2042 Oct 02 j 04:10	15° ™	
conjunction	-2049 Oct 27 j 23:11	17° ≏ 58'17	0°26'57				
minimum elong	-2049 Oct 27 j 23:11		0°26'56	conjunction	-2042 Nov 25 j 23:40		0°04'49
max. Earth dist.	-2049 Oct 28 j 07:12		20.07018 AU	minimum elong	-2042 Nov 25 j 23:40		0°04'48
retrograde	-2048 Feb 12 j 12:32	22° Ω 09'52		behind sun begin	-2042 Nov 25 j 17:18	17°M54'33	
opposition	-2048 Apr 28 j 17:09	20° ⊆ 09'58	0°28'19	behind sun end	-2042 Nov 26 j 06:03	17°M56'24	
min. Earth dist.	-2048 Apr 28 j 07:30		18.10475 AU			17°m 50'//1	20 54620 ATT
direct	-2048 Jul 14 j 20:52			max. Earth dist.	-2042 Nov 26 j 21:18		20.54629 AU
	· ·	18° 11 08'52		retrograde	-2041 Mar 14 j 08:27	22°M01'19	
	-		0°24'02	retrograde opposition	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52	22°M01'19 20°M01'54	0°03'24
conjunction	-2048 Oct 31 j 12:09	22° ≙ 21'15	0°24'02	retrograde opposition min. Earth dist.	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09	22°M01'19 20°M01'54 20°M04'05	
minimum elong	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09	22° £ 21'15 22° £ 21'15	0°24'01	retrograde opposition	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52	22°M01'19 20°M01'54 20°M04'05	0°03'24
minimum elong max. Earth dist.	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01	22° £ 21'15 22° £ 21'15 22° £ 22'54		retrograde opposition min. Earth dist. direct	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52	22°M01'19 20°M01'54 20°M04'05 18°M03'20	0°03'24 18.57889 AU
minimum elong max. Earth dist. retrograde	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40	22°\(\Omega\)21'15 22°\(\Omega\)21'15 22°\(\Omega\)22'54 26°\(\Omega\)31'54	0°24'01 20.13940 AU	retrograde opposition min. Earth dist. direct conjunction	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13	22°M01'19 20°M01'54 20°M04'05 18°M03'20 22°M05'03	0°03'24 18.57889 AU 0°01'28
minimum elong max. Earth dist. retrograde opposition	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14	22°\pi21'15 22°\pi21'15 22°\pi22'54 26°\pi31'54 24°\pi32'03	0°24'01 20.13940 AU 0°24'59	retrograde opposition min. Earth dist. direct conjunction minimum elong	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03	0°03'24 18.57889 AU
minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04	22° \(\Omega\)21'15 22° \(\Omega\)21'15 22° \(\Omega\)22'54 26° \(\Omega\)31'54 24° \(\Omega\)32'03 24° \(\Omega\)33'12	0°24'01 20.13940 AU 0°24'59	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03 22°M.04'07	0°03'24 18.57889 AU 0°01'28
minimum elong max. Earth dist. retrograde opposition	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14	22° \(\Omega\)21'15 22° \(\Omega\)21'15 22° \(\Omega\)22'54 26° \(\Omega\)31'54 24° \(\Omega\)32'03 24° \(\Omega\)33'12	0°24'01 20.13940 AU 0°24'59	retrograde opposition min. Earth dist. direct conjunction minimum elong	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03 22°M.04'07 22°M.06'00	0°03'24 18.57889 AU 0°01'28
minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04	22° \(\Omega\)21'15 22° \(\Omega\)21'15 22° \(\Omega\)22'54 26° \(\Omega\)31'54 24° \(\Omega\)33'12 22° \(\Omega\)31'19	0°24'01 20.13940 AU 0°24'59 18.17363 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03 22°M.04'07 22°M.06'00 22°M.08'19	0°03'24 18.57889 AU 0°01'28 0°01'26
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56	22° \(\Omega\)21'15 22° \(\Omega\)21'15 22° \(\Omega\)22'54 26° \(\Omega\)31'54 24° \(\Omega\)33'12 22° \(\Omega\)31'19 26° \(\Omega\)42'01	0°24'01 20.13940 AU 0°24'59 18.17363 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.06'00 22°M.08'19 26°M.10'15	0°03'24 18.57889 AU 0°01'28 0°01'26
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.06'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 May 06 j 11:13	22°M.01'19 20°M.01'54 20°M.04'05 18°M.03'20 22°M.05'03 22°M.05'03 22°M.04'07 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU
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minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0° \(\Omega\) 43'47 30° \(\Omega\) 28° \(\Omega\) 51'58	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22	22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0° \(\Omega\) 51'47 30° \(\Rac{\Omega}\) 28° \(\Omega\) 51'58 28° \(\Omega\) 53'18	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 14:28	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22 -2046 Jul 24 j 10:54	22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0° \(\Omega\) 43'47 28° \(\Omega\) 51'58 28° \(\Omega\) 53'18 26° \(\Omega\) 51'33	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 14:28 -2040 Dec 03 j 07:56	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22	22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0° \(\Omega\) 51'47 30° \(\Rac{\Omega}\) 28° \(\Omega\) 51'58 28° \(\Omega\) 53'18	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 14:28 -2040 Dec 03 j 07:56 -2040 Dec 03 j 20:59	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16 0°-1'-56 0°02'00
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22 -2046 Oct 23 j 14:31	22° \(\Omega 21'15\) 22° \(\Omega 21'15\) 22° \(\Omega 22'54\) 26° \(\Omega 31'54\) 24° \(\Omega 33'12\) 22° \(\Omega 31'19\) 26° \(\Omega 42'01\) 26° \(\Omega 42'01\) 26° \(\Omega 43'47\) 0° \(\Omega 64'3'47\) 0° \(\Omega 65'1'33\)	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU 0°21'33 18.24222 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 May 06 j 11:13 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 14:28 -2040 Dec 03 j 20:59 -2040 Dec 04 j 14:40	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22 -2046 Jul 24 j 10:54 -2046 Nov 09 j 11:03	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0" \(\Omega\) 51'58 28° \(\Omega\) 51'58 28° \(\Omega\) 51'33 0° \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 1" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 1" \(\Omega\) 1" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 2" \(\Omega\) 1" \(\Omega\) 1" \(\Omega\) 2"	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU 0°21'33 18.24222 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 May 06 j 11:13 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 07:56 -2040 Dec 03 j 20:59 -2040 Dec 04 j 14:40 -2039 Feb 23 j 12:33	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14 26°M.13'14 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16 0°-1'-56 0°02'00
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22 -2046 Jul 24 j 10:54 -2046 Nov 09 j 11:03 -2046 Nov 09 j 11:03	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0" \(\Omega\) 51'58 28° \(\Omega\) 51'58 28° \(\Omega\) 51'33 0° \(\Omega\) 1° \(\Omega\) 00'37 1° \(\Omega\) 00'37	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU 0°21'33 18.24222 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 May 06 j 11:13 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 20:59 -2040 Dec 04 j 14:40 -2039 Feb 23 j 12:33 -2039 Mar 22 j 06:37	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14 26°M.13'14 26°M.13'14	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16 0°-1'-56 0°02'00
minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2048 Oct 31 j 12:09 -2048 Oct 31 j 12:09 -2048 Oct 31 j 23:01 -2047 Feb 16 j 02:40 -2047 May 03 j 13:14 -2047 May 03 j 02:04 -2047 Jul 19 j 16:56 -2047 Nov 04 j 23:53 -2047 Nov 04 j 23:53 -2047 Nov 05 j 11:35 -2046 Jan 06 j 14:36 -2046 Feb 20 j 18:01 -2046 Apr 08 j 18:26 -2046 May 08 j 08:28 -2046 May 07 j 19:22 -2046 Jul 24 j 10:54 -2046 Nov 09 j 11:03	22° \(\Omega\) 21'15 22° \(\Omega\) 21'15 22° \(\Omega\) 22'54 26° \(\Omega\) 31'54 24° \(\Omega\) 33'12 22° \(\Omega\) 31'19 26° \(\Omega\) 42'01 26° \(\Omega\) 42'01 26° \(\Omega\) 43'47 0° \(\Omega\) 0" \(\Omega\) 51'58 28° \(\Omega\) 51'58 28° \(\Omega\) 51'33 0° \(\Omega\) 1° \(\Omega\) 00'37 1° \(\Omega\) 00'37	0°24'01 20.13940 AU 0°24'59 18.17363 AU 0°21'00 0°20'58 20.20811 AU 0°21'33 18.24222 AU	retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde desc. node min. Earth dist. opposition direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2041 Mar 14 j 08:27 -2041 May 30 j 19:52 -2041 May 29 j 22:09 -2041 Aug 15 j 14:52 -2041 Nov 30 j 07:13 -2041 Nov 30 j 07:13 -2041 Nov 30 j 00:41 -2041 Nov 30 j 13:45 -2041 Dec 01 j 05:20 -2040 Mar 17 j 19:15 -2040 May 06 j 11:13 -2040 Jun 02 j 11:57 -2040 Jun 03 j 10:20 -2040 Aug 19 j 01:56 -2040 Dec 03 j 14:28 -2040 Dec 03 j 07:56 -2040 Dec 03 j 20:59 -2040 Dec 04 j 14:40 -2039 Feb 23 j 12:33	22°M.01'19 20°M.01'54 20°M.03'20 22°M.05'03 22°M.05'03 22°M.06'00 22°M.08'19 26°M.10'15 25°M.14'48 24°M.13'12 24°M.10'58 22°M.12'47 26°M.13'14 26°M.13'14 26°M.13'14 26°M.16'48 0° 🗷 10'50 30°RM.	0°03'24 18.57889 AU 0°01'28 0°01'26 20.61099 AU 18.64266 AU 0°00'-16 0°-1'-56 0°02'00

•	ical year style is used: T		•	. //	2040 BCE in historical		age 23
opposition	-2039 Jun 08 j 00:06	-		conjunction	-2031 Jan 04 j 11:00		
direct	-2039 Aug 23 j 14:17		0 3 50	minimum elong	-2031 Jan 04 j 11:00		
	-2039 Dec 02 j 04:23	0° ∡ 7		max. Earth dist.	-2031 Jan 05 j 15:09		21.03023 AU
	,				-2031 Jan 29 j 12:38	ರ°ರ	
conjunction	-2039 Dec 07 j 21:04	0° ∡ °20′07	0°-5'-14	retrograde	-2031 Apr 24 j 08:19	2° ප 36'21	
minimum elong	-2039 Dec 07 j 21:05	0° ∡ ¹20'07	0°05'17	min. Earth dist.	-2031 Jul 10 j 11:40	0° る 39'57	19.04399 AU
behind sun begin	-2039 Dec 07 j 14:45	0° ∡ 19'12		opposition	-2031 Jul 11 j 14:42	0° ට 37'15	0°-30'-24
behind sun end	-2039 Dec 08 j 03:25	0° ∡ °21′01			-2031 Jul 27 j 10:34		
max. Earth dist.	-2039 Dec 08 j 21:28	0° ∡ ¹23'42	20.73306 AU	direct	-2031 Sep 25 j 10:43	28° ∡ ¹40'57	
retrograde	-2038 Mar 26 j 16:39	4° ∡ °24′10			-2031 Nov 21 j 06:52	0°ಕ	
opposition	-2038 Jun 12 j 13:18	2° ∡ 125'06					
min. Earth dist.	-2038 Jun 11 j 13:11		18.76171 AU	conjunction	-2030 Jan 08 j 15:22	2° る 33'13	
direct	-2038 Aug 28 j 00:07	0° ∡ ¹27'37		minimum elong	-2030 Jan 08 j 15:22	2° る 33'13	
conjunction	-2038 Dec 12 j 03:37	4° ∡ ¹25'46	00 81 30	max. Earth dist. retrograde	-2030 Jan 09 j 19:05 -2030 Apr 28 j 15:06	2 3 3712 6° る 34'11	21.05603 AU
minimum elong	-2038 Dec 12 j 03:36	4° ×7 25'46		opposition	-2030 Apr 28 j 13:00 -2030 Jul 15 j 22:58	4°る35'03	0°-33'-8
behind sun begin	-2038 Dec 11 j 21:52	4° × ⁷ 24'56	0 00 33	min. Earth dist.	-2030 Jul 14 j 20:50		19.06809 AU
behind sun end	-2038 Dec 12 j 09:20	4°×726'35		direct	-2030 Sep 29 j 15:09	2° る 38'50	19.00009110
max. Earth dist.	-2038 Dec 13 j 05:27		20.78902 AU				
retrograde	-2037 Mar 31 j 03:09	8° ∡ "29′16		conjunction	-2029 Jan 12 j 19:53	6° ප 30'38	0°-31'-9
min. Earth dist.	-2037 Jun 16 j 00:07	6° ∡ ³32'50	18.81559 AU	minimum elong	-2029 Jan 12 j 19:53	6° ට 30'38	0°31'12
opposition	-2037 Jun 17 j 01:31	6° ∡ ³30′18	0°-11'-8	max. Earth dist.	-2029 Jan 14 j 00:21	6° る 34'43	21.07832 AU
direct	-2037 Sep 01 j 10:40	4° ∡ ³33'07		retrograde	-2029 May 02 j 23:39	10° පි 31'27	
				min. Earth dist.	-2029 Jul 19 j 03:27		19.08851 AU
conjunction	-2037 Dec 16 j 09:37		0°-11'-40	opposition	-2029 Jul 20 j 06:29	8° る 32'17	0°-35'-42
minimum elong	-2037 Dec 16 j 09:37	8° ∡ 30'12	0°11'43	direct	-2029 Oct 03 j 22:18	6° る 36'10	
behind sun begin	-2037 Dec 16 j 04:56	8° ∡ 129'32			2020 1 17:00 14	100-70-50	00 221 24
behind sun end	-2037 Dec 16 j 14:18	8° ₹30'52	20.04065.411	conjunction	-2028 Jan 17 j 00:14		
max. Earth dist.	-2037 Dec 17 j 11:11 -2036 Apr 03 j 12:22	12° x '33'15	20.84065 AU	minimum elong max. Earth dist.	-2028 Jan 17 j 00:14 -2028 Jan 18 j 04:00		
retrograde opposition	-2036 Apr 03 j 12.22 -2036 Jun 20 j 13:26	12 x ·33 13 10° x ⁷ 34'19	0°-14'-37	retrograde	-2028 May 06 j 06:54		21.09084 AU
min. Earth dist.	-2036 Jun 19 j 12:24		18.86505 AU	opposition	-2028 Jul 23 j 13:59		0°-38'-5
direct	-2036 Sep 04 j 19:21	8° ∡ 737'22	10.00203710	min. Earth dist.	-2028 Jul 22 j 12:07		
				direct	-2028 Oct 07 j 01:49		
conjunction	-2036 Dec 19 j 15:18	12° ∡ ³33'28	0°-14'-47		,		
minimum elong	-2036 Dec 19 j 15:18	12° ∡ ³33'28	0°14'50	conjunction	-2027 Jan 20 j 04:44	14° පි 24'18	0°-35'-29
behind sun begin	-2036 Dec 19 j 12:33	12° ₹ ³33'05		minimum elong	-2027 Jan 20 j 04:43	14° පි 24'18	0°35'32
behind sun end	-2036 Dec 19 j 18:02			max. Earth dist.	-2027 Jan 21 j 09:00	14° පි 28'20	21.11157 AU
max. Earth dist.	-2036 Dec 20 j 18:03		20.88770 AU	retrograde	-2027 May 10 j 15:10		
retrograde	-2035 Apr 07 j 22:18	16° ∡ ³36′03		opposition	-2027 Jul 27 j 21:01		
min. Earth dist.	-2035 Jun 23 j 22:21			min. Earth dist.	-2027 Jul 26 j 18:30		19.11777 AU
opposition	-2035 Jun 25 j 00:35		0°-18'-2	direct	-2027 Oct 11 j 08:11	14° 6 29'55	
direct	-2035 Sep 09 j 04:56	12°×'40'24		conjunction	-2026 Jan 24 j 09:26	100=20054	00 27! 25
conjunction	-2035 Dec 23 j 20:37	16° √ 35'3∕I	0°-17'-48	minimum elong	-2026 Jan 24 j 09:26		
minimum elong	-2035 Dec 23 j 20:38	16° × 35'34		max. Earth dist.	-2026 Jan 25 j 12:38		
max. Earth dist.	3		20.92988 AU	retrograde	-2026 May 14 j 22:41		21.121/3/10
retrograde	-2034 Apr 12 j 06:29	20° ∡ ³37'44		min. Earth dist.	-2026 Jul 31 j 02:58		19.12590 AU
min. Earth dist.	-2034 Jun 28 j 09:33		18.94957 AU	opposition	-2026 Aug 01 j 03:48	20° පි 22'31	0°-42'-20
opposition	-2034 Jun 29 j 11:05	18° ∡ ³38'47	0°-21'-19	direct	-2026 Oct 15 j 11:28	18° ට 26'37	
direct	-2034 Sep 13 j 12:17	16° ∡ ¹42'11					
				conjunction	-2025 Jan 28 j 14:31		
conjunction	-2034 Dec 28 j 01:45			minimum elong	-2025 Jan 28 j 14:31		
minimum elong	-2034 Dec 28 j 01:45			max. Earth dist.	-2025 Jan 29 j 17:41		21.12769 AU
max. Earth dist.	-2034 Dec 29 j 05:09		20.96751 AU	retrograde	-2025 May 19 j 07:08		10 10007 411
retrograde	-2033 Apr 16 j 16:01	24° 🗷 38'16	09 241 20	min. Earth dist.	-2025 Aug 04 j 09:18		
opposition min. Earth dist.	-2033 Jul 03 j 20:49 -2033 Jul 02 j 18:10	22° √ 39'16	0°-24'-29 18.98496 AU	opposition	-2025 Aug 05 j 10:19 -2025 Oct 19 j 16:51		U -44 -1U
direct	-2033 Jul 02 j 18:10 -2033 Sep 17 j 21:00		10.70 4 70 AU	direct	-2023 Oct 19 J 10:31	22 023 24	
direct	2033 Sep 1/ J 21.00	2V A 724/		conjunction	-2024 Feb 01 j 19:39	26°₹14'21	0°-40'-44
conjunction	-2032 Jan 01 j 06:22	24° ∡ 736'19	0°-23'-32	minimum elong	-2024 Feb 01 j 19:39		
minimum elong	-2032 Jan 01 j 06:21			max. Earth dist.	-2024 Feb 02 j 21:20		21.12815 AU
max. Earth dist.	-2032 Jan 02 j 09:27		21.00073 AU		-2024 Apr 27 j 04:34	0° ≈	
retrograde	-2032 Apr 19 j 23:01			retrograde	-2024 May 22 j 14:27	0° ≈ 15′28	
min. Earth dist.	-2032 Jul 06 j 04:13		19.01633 AU		-2024 Jun 17 j 06:37	30°Ŗ₹	
opposition	-2032 Jul 07 j 06:07		0°-27'-31	opposition	-2024 Aug 08 j 16:56		
direct	-2032 Sep 21 j 02:55	24° ∡ °42′20		min. Earth dist.	-2024 Aug 07 j 17:55	28° る 18'34	19.12682 AU

Attention astronom	ucal vear style is used. Th	ne vear =2024	in astronomical coi	inting style is the year	2025 BCE in historical of	ounting style	
direct	-2024 Oct 22 j 20:31	-	in astronomical co	opposition	-2016 Sep 09 j 17:48	0° H 06'30	
	-2023 Feb 01 j 17:04	0°≈		min. Earth dist.	-2016 Sep 09 j 05:11		18.91922 AU
					-2016 Sep 12 j 09:15	30°R≈	
conjunction	-2023 Feb 05 j 01:26	0° ≈ 11'26	0°-42'-6	direct	-2016 Nov 23 j 10:16		
minimum elong	-2023 Feb 05 j 01:26	0° ≈ 11'26	0°42'10		-2015 Jan 30 j 12:11	0°) €	
max. Earth dist.	-2023 Feb 06 j 02:39	0°≈15'02	21.12309 AU		•		
retrograde	-2023 May 26 j 23:37	4°≈12'45		conjunction	-2015 Mar 09 j 13:36	2°) €04'18	0°-45'-29
opposition	-2023 Aug 12 j 23:10	2° ≈ 13'29	0°-47'-12	minimum elong	-2015 Mar 09 j 13:36	2° ℋ 04'18	0°45'30
min. Earth dist.	-2023 Aug 12 j 00:20	2° ≈ 15'47	19.11877 AU	max. Earth dist.	-2015 Mar 10 j 03:43	2° ∺ 06'19	20.89773 AU
direct	-2023 Oct 27 j 01:37	0° ≈ 17'32		retrograde	-2015 Jun 28 j 21:01	6°) €09'00	
				min. Earth dist.	-2015 Sep 13 j 11:56		18.87585 AU
conjunction	-2022 Feb 09 j 07:28	4° ≈ 08'49	0°-43'-17	opposition	-2015 Sep 14 j 00:06	4°) €08'42	0°-50'00
minimum elong	-2022 Feb 09 j 07:28	4° ≈ 08'49	0°43'19	direct	-2015 Nov 27 j 16:46	2°) 11′08	
max. Earth dist.	-2022 Feb 10 j 06:45		21.11203 AU		201437 12:22.42	60 V 0 5 11.1	00 441 54
retrograde	-2022 May 31 j 06:40	8°≈10'23	10 10472 ATT	conjunction	-2014 Mar 13 j 23:42	6°) (07'11	0°-44'-54
min. Earth dist.	-2022 Aug 16 j 09:01		19.10472 AU	minimum elong	-2014 Mar 13 j 23:42	6°) €07'12	0°44'57
opposition	-2022 Aug 17 j 05:31	6°≈11'02	0°-48′-23	max. Earth dist.	-2014 Mar 14 j 11:44	6° ★08'55 10° ★12'33	20.85286 AU
direct	-2022 Oct 31 j 05:25	4°≈14'58		retrograde opposition	-2014 Jul 03 j 06:26 -2014 Sep 18 j 06:57	8° H 12'09	0°-49'-15
conjunction	-2021 Feb 13 j 13:57	8° ≈ 06'31	0°-44'-15	min. Earth dist.	-2014 Sep 17 j 21:14		18.82949 AU
minimum elong	-2021 Feb 13 j 13:57	8°≈06'31	0°44'18	direct	-2014 Sep 17 j 21:14 -2014 Dec 01 j 21:28	6° H 14'22	16.62949 AU
max. Earth dist.	-2021 Feb 14 j 12:28		21.09511 AU	direct	-2014 Dec 01 j 21.20	0 /(1422	
retrograde	-2021 Jun 04 j 16:12	12°≈08'22	21.07311 AO	conjunction	-2013 Mar 18 j 10:31	10°¥11'26	0°-44'-6
opposition	-2021 Aug 21 j 11:28	10°≈08'54	0°-49'-20	minimum elong	-2013 Mar 18 j 10:31		0°44'08
min. Earth dist.	-2021 Aug 20 j 15:17		19.08489 AU	max. Earth dist.	-2013 Mar 18 j 21:12		
direct	-2021 Nov 04 j 10:59	8° ≈ 12'41		retrograde	-2013 Jul 07 j 18:20		
	,			opposition	-2013 Sep 22 j 13:56		0°-48'-15
conjunction	-2020 Feb 17 j 20:38	12° ≈ 04'35	0°-45'00	min. Earth dist.	-2013 Sep 22 j 04:52	12° 升 17′58	18.78017 AU
minimum elong	-2020 Feb 17 j 20:37	12° ≈ 04'35	0°45'03	direct	-2013 Dec 06 j 04:41	10°) (19′01	
max. Earth dist.	-2020 Feb 18 j 17:13	12° ≈ 07'31	21.07264 AU				
	-2020 Apr 15 j 06:26	15° ≈		conjunction	-2012 Mar 21 j 22:11	14° ∺ 17'11	0°-43'-5
retrograde	-2020 Jun 07 j 22:58	16° ≈ 06'47		minimum elong	J	14°) (17′11	0°43'07
	-2020 Aug 02 j 05:04	15°R≈		max. Earth dist.			20.75426 AU
opposition	-2020 Aug 24 j 17:35	14° ≈ 07′10		retrograde	,	18° ∺ 24'01	
min. Earth dist.	-2020 Aug 23 j 23:44		19.05992 AU	opposition	-2012 Sep 25 j 21:28	16° ∺ 23′27	
direct	-2020 Nov 07 j 14:20	12°≈10'45		min. Earth dist.	-2012 Sep 25 j 15:09		18.72769 AU
	-2019 Feb 02 j 11:09	15° ≈		direct	-2012 Dec 09 j 10:11	14° ¥ 25′11	
. ,.	2010 F. 1 21 : 02 40	1.60 - 0210.6	00.451.22		2011.34 26:10.50	100 1/2 4/22	00 411 40
conjunction	-2019 Feb 21 j 03:48 -2019 Feb 21 j 03:48	16°≈03'06 16°≈03'06	0°-45'-32 0°45'35	conjunction	-2011 Mar 26 j 10:50		0°-41'-49 0°41'51
minimum elong		10.5803.00	0-45-55		2011 Man 26: 10.50		
mov Forth dist	-			minimum elong	-2011 Mar 26 j 10:50		
max. Earth dist.	-2019 Feb 21 j 23:41	16° ≈ 05′56	21.04540 AU	max. Earth dist.	-2011 Mar 26 j 17:25	18° ¥ 25′29	
retrograde	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52	16°≈05'56 20°≈05'41	21.04540 AU	max. Earth dist. retrograde	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33	18°¥25'29 22°¥32'08	20.70019 AU
retrograde opposition	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29	16°≈05'56 20°≈05'41 18°≈05'55	21.04540 AU 0°-50'-31	max. Earth dist. retrograde opposition	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20	18°¥25'29 22°¥32'08 20°¥31'29	20.70019 AU 0°-45'-29
retrograde opposition min. Earth dist.	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41	21.04540 AU	max. Earth dist. retrograde opposition min. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05	18°¥25'29 22°¥32'08 20°¥31'29 20°¥32'02	20.70019 AU 0°-45'-29
retrograde opposition	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41	21.04540 AU 0°-50'-31	max. Earth dist. retrograde opposition	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20	18°¥25'29 22°¥32'08 20°¥31'29 20°¥32'02	20.70019 AU 0°-45'-29
retrograde opposition min. Earth dist.	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17	21.04540 AU 0°-50'-31 19.03037 AU	max. Earth dist. retrograde opposition min. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05	18°¥25'29 22°¥32'08 20°¥31'29 20°¥32'02 18°¥32'55	20.70019 AU 0°-45'-29 18.67175 AU
retrograde opposition min. Earth dist. direct	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17	21.04540 AU 0°-50'-31 19.03037 AU	max. Earth dist. retrograde opposition min. Earth dist. direct	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42	18°¥25'29 22°¥32'08 20°¥31'29 20°¥32'02 18°¥32'55 22°¥33'31	20.70019 AU 0°-45'-29 18.67175 AU
retrograde opposition min. Earth dist. direct conjunction	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21
retrograde opposition min. Earth dist. direct conjunction minimum elong	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26	$16^{\circ} \approx 05'56$ $20^{\circ} \approx 05'41$ $18^{\circ} \approx 05'55$ $18^{\circ} \approx 07'41$ $16^{\circ} \approx 09'17$ $20^{\circ} \approx 02'11$ $20^{\circ} \approx 02'11$ $20^{\circ} \approx 04'44$	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31 22°\£33'4'06	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈05'17	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31 22°\£34'06 26°\£41'56	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈05'17	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31 22°\£34'06 26°\£41'56 24°\£41'10	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈05'17 22°≈06'50	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31 22°\£34'06 26°\£41'56 24°\£41'10 24°\£41'24	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£41'56 24°\£41'10 24°\£41'10	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£43'06 26°\£41'56 24°\£41'10 24°\£41'24 22°\£42'16	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU 0°-45'-57 0°45'59	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£41'56 24°\£41'10 24°\£41'24 22°\£42'16 26°\£44'09 26°\£44'09	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38 0°38'39
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38 -2017 Mar 02 j 12:42	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58 24°≈01'58 24°≈04'24	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49 -2009 Apr 04 j 16:31	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£41'56 24°\£41'10 24°\£41'24 22°\£42'16	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde conjunction minimum elong max. Earth dist. retrograde	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38 -2017 Mar 02 j 12:42 -2017 Jun 21 j 02:07	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58 24°≈01'58 24°≈04'24 28°≈05'29	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU 0°-45'-57 0°45'59 20.97837 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49 -2009 Apr 04 j 16:31 -2009 Jun 08 j 01:28	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£41'56 24°\£41'10 24°\£41'14 22°\£42'16 26°\£44'09 26°\£44'09 26°\£44'24 0°\Y	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38 0°38'39
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38 -2017 Mar 02 j 12:42 -2017 Jun 21 j 02:07 -2017 Sep 06 j 11:26	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58 24°≈01'58 24°≈04'24 28°≈05'29 26°≈05'25	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU 0°-45'-57 0°45'59 20.97837 AU 0°-50'-45	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49 -2009 Apr 04 j 16:31 -2009 Jun 08 j 01:28 -2009 Jul 24 j 20:50	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£34'06 26°\£41'56 24°\£41'10 24°\£41'14 22°\£42'16 26°\£44'09 26°\£44'09 26°\£44'24 0°\£\0°\£0°\£53'22	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38 0°38'39
retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38 -2017 Mar 02 j 12:42 -2017 Jun 21 j 02:07 -2017 Sep 06 j 11:26 -2017 Sep 05 j 20:32	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58 24°≈04'24 28°≈05'29 26°≈05'25 26°≈06'57	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU 0°-45'-57 0°45'59 20.97837 AU	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49 -2009 Apr 04 j 16:31 -2009 Jun 08 j 01:28 -2009 Jul 24 j 20:50 -2009 Sep 10 j 09:59	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£32'55 22°\£33'31 22°\£33'31 22°\£34'06 26°\£41'56 24°\£41'10 24°\£41'16 26°\£44'09 26°\£44'09 26°\£44'24 0°\\$\formalf	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38 0°38'39 20.58088 AU
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retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-2019 Feb 21 j 23:41 -2019 Jun 12 j 08:52 -2019 Aug 28 j 23:29 -2019 Aug 28 j 05:58 -2019 Nov 11 j 20:36 -2018 Feb 25 j 11:26 -2018 Feb 25 j 11:26 -2018 Feb 26 j 05:22 -2018 Jun 16 j 15:50 -2018 Sep 02 j 05:26 -2018 Sep 01 j 14:16 -2018 Nov 15 j 23:52 -2017 Mar 01 j 19:38 -2017 Mar 01 j 19:38 -2017 Mar 02 j 12:42 -2017 Jun 21 j 02:07 -2017 Sep 06 j 11:26 -2017 Sep 05 j 20:32 -2017 Nov 20 j 06:20 -2016 Mar 05 j 04:09 -2016 Mar 05 j 04:09	16°≈05'56 20°≈05'41 18°≈05'55 18°≈07'41 16°≈09'17 20°≈02'11 20°≈02'11 20°≈04'44 24°≈05'12 22°≈06'50 20°≈08'25 24°≈01'58 24°≈01'58 24°≈01'58 24°≈05'29 26°≈05'25 26°≈06'57 24°≈08'20 28°≈02'37 28°≈02'37 28°≈02'37	21.04540 AU 0°-50'-31 19.03037 AU 0°-45'-51 0°45'54 21.01373 AU 0°-50'-45 18.99677 AU 0°-45'-57 0°45'59 20.97837 AU 0°-50'-45 18.95961 AU 0°-45'-50 0°45'-50 0°45'-52	max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist.	-2011 Mar 26 j 17:25 -2011 Jul 15 j 18:33 -2011 Sep 30 j 05:20 -2011 Sep 30 j 00:05 -2011 Dec 13 j 18:42 -2010 Mar 31 j 00:24 -2010 Mar 31 j 00:24 -2010 Mar 31 j 04:28 -2010 Jul 20 j 06:13 -2010 Oct 04 j 13:45 -2010 Oct 04 j 11:27 -2010 Dec 18 j 01:40 -2009 Apr 04 j 14:49 -2009 Apr 04 j 14:49 -2009 Apr 04 j 16:31 -2009 Jul 24 j 20:50 -2009 Sep 10 j 09:59 -2009 Oct 08 j 22:39 -2009 Oct 08 j 21:32 -2009 Dec 22 j 11:24	18°\£25'29 22°\£32'08 20°\£31'29 20°\£32'02 18°\£33'31 22°\£33'31 22°\£33'31 22°\£41'56 24°\£41'10 24°\£41'24 22°\£42'16 26°\£44'09 26°\£44'09 26°\£44'24 0°\\$\tag{0}^\\$\tag{0}^\\$\tag{53'22} 30°\\$\£28°\£52'27 28°\£52'34 26°\£53'11 0°\\$\tag{1}	20.70019 AU 0°-45'-29 18.67175 AU 0°-40'-20 0°-40'21 20.64232 AU 0°-43'-44 18.61202 AU 0°-38'-38 0°38'39 20.58088 AU 0°-41'-44 18.54873 AU

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -2008 in astronomical counting style is the year 2009 BCE in historical counting style. 0°**Υ**56'19 20.51586 AU -2008 Apr 08 i 05:16 behind sun begin -2000 May 14 j 11:25 5°**8**36'13 max. Earth dist. -2008 Jul 28 i 09:47 5°Y06'26 behind sun end -2000 May 14 j 16:51 5°837'01 retrograde opposition -2008 Oct 12 j 08:09 3°Υ05'21 0°-39'-29 -2000 May 13 j 21:35 5°**8**34'09 19.95054 AU max. Earth dist. -2000 Sep 01 j 21:25 -2008 Oct 12 j 09:55 3°**Y**05'10 18.48213 AU min. Earth dist. 9°**8**53'34 retrograde -2008 Dec 25 j 20:13 1°Y05'40 -2000 Nov 15 j 08:35 7°**8**51'20 0°-14'-12 direct opposition min. Earth dist. -2000 Nov 15 j 23:19 7°**8**49'44 17.91665 AU 5°Υ10'16 0°-34'-33 -1999 Jan 29 j 03:52 conjunction -2007 Apr 12 j 22:04 direct 5°**8**48'19 -2007 Apr 12 j 22:04 minimum elong 5°Υ10'16 0°34'34 -1999 May 19 j 13:05 10°**8**05'35 0°-11'-5 -2007 Apr 12 j 18:52 max. Earth dist. 5°**Υ**09'48 20.44801 AU conjunction -1999 May 19 j 13:05 10°**8**05'35 retrograde -2007 Aug 02 j 00:55 9°**Y**21′07 minimum elong 0°11'04 opposition -2007 Oct 16 j 17:55 7°**Υ**19'50 0°-37'00 behind sun begin -1999 May 19 j 08:06 10°**8**04'51 -1999 May 19 j 18:05 10°**8**06'19 min. Earth dist. -2007 Oct 16 j 20:57 7°**Υ**19'31 18.41300 AU behind sun end -2007 Dec 30 j 07:15 -1999 May 18 j 17:40 10°**8**02'40 19.88343 AU direct 5°**Υ**19'43 max. Earth dist. retrograde -1999 Sep 06 j 16:54 14°**8**23'26 conjunction -2006 Apr 17 j 15:03 9°**Y**25'46 0°-32'-12 opposition -1999 Nov 19 j 23:54 12°**8**21'09 0°-10'-20 minimum elong -2006 Apr 17 j 15:03 9°Υ25'46 0°32'13 min. Earth dist. -1999 Nov 20 j 16:05 12°**8**19'24 17.85044 AU max. Earth dist. -2006 Apr 17 j 09:47 9°**Υ**25'00 20.37778 AU direct -1998 Feb 02 j 21:50 10°**8**17'48 retrograde -2006 Aug 06 j 15:06 13°**Y**37'26 opposition -2006 Oct 21 j 04:25 11° Υ35'58 0°-34'-19 conjunction -1998 May 24 j 13:05 14°**8**36'45 min. Earth dist. -2006 Oct 21 j 10:03 11° Υ35'22 18.34194 AU minimum elong -1998 May 24 j 13:05 14°**8**36'45 0°07'32 direct -2005 Jan 03 j 17:40 9°**Y**35'24 behind sun begin -1998 May 24 j 06:56 14°**8**35'51 behind sun end -1998 May 24 j 19:14 14°**8**37'40 conjunction $-2005 \text{ Apr } 22 \text{ j } 08:35 \quad 13^{\circ} \Upsilon 42'55 \quad 0^{\circ} -29' -40$ max. Earth dist. minimum elong $-2005 \text{ Apr } 22 \text{ j } 08:36 \quad 13^{\circ} \Upsilon 42'55$ 0°29'40 -1998 May 30 j 23:01 15°8 max. Earth dist. -2005 Apr 22 j 00:50 13°**Y**41'47 20.30619 AU retrograde -1998 Sep 11 j 12:38 18°855'26 retrograde -2005 Aug 11 j 07:02 17°**Y**55'27 opposition -1998 Nov 24 j 16:15 16°\(\arrow\)53'09 0°-6'-21 opposition -2005 Oct 25 j 15:22 15°**Υ**'53'47 0°-31'-24 min. Earth dist. -1998 Nov 25 j 09:54 16°851'14 17.78574 AU $-2005 \text{ Oct } 25 \text{ j } 22:06 \quad 15^{\circ} \Upsilon 53'04 \quad 18.26989 \text{ AU}$ -1997 Jan 18 j 17:03 15°R8 min. Earth dist. -2004 Jan 08 j 06:05 13°**Y**52'45 -1997 Feb 07 j 15:26 14°849'28 direct direct -1997 Feb 27 j 13:06 15°8 -2004 Apr 26 j 03:13 18°**Υ**01'49 0°-26'-57 conjunction -2004 Apr 26 j 03:13 18°**Y**01'49 0°26'57 -1997 May 29 j 13:33 19°8 10'03 0°-3'-58 minimum elong conjunction -2004 Apr 25 j 17:54 18°**Y**00'27 20.23380 AU -1997 May 29 j 13:33 19°**8**10'03 max. Earth dist. 0°03'57 minimum elong -1997 May 29 j 06:51 19°**8**09'03 -2004 Aug 14 j 22:30 22°**Y**15'13 retrograde behind sun begin -1997 May 29 j 20:16 19°**8**11'02 $-2004 \text{ Oct } 29 \text{ j } 02:57 \quad 20^{\circ} \Upsilon 13'22 \quad 0^{\circ} -28'-18$ opposition behind sun end -2004 Oct 29 j 11:58 20° Υ 12'24 18.19746 AU -1997 May 28 j 14:37 19°**8**06'34 19.75403 AU min. Earth dist. max. Earth dist. -2003 Jan 11 j 17:56 18°**Υ**11'54 -1997 Sep 16 j 09:07 23°**8**29'33 direct retrograde opposition -1997 Nov 29 j 09:26 21°**8**27'13 0°-2'-19 -2003 Apr 30 j 22:37 22°**Y**°22'32 0°-24'-3 conjunction min. Earth dist. -1997 Nov 30 j 04:44 21°**8**25'07 17.72273 AU minimum elong -2003 Apr 30 j 22:37 22°**Y**22'32 0°24'03 direct -1996 Feb 12 j 11:32 19°**8**23'11 max. Earth dist. -2003 Apr 30 j 10:39 22°**Y**20'46 20.16153 AU -2003 Aug 19 j 15:38 26°**Y**36'49 -1996 Jun 02 j 15:09 23°**8**45'21 0°00'-14 retrograde conjunction -2003 Nov 02 j 15:12 24°**Υ**'34'49 0°-25'-1 -1996 Jun 02 j 15:09 23°**8**45'21 opposition minimum elong min. Earth dist. -2003 Nov 03 j 01:17 24° Υ 33'44 18.12545 AU behind sun begin -1996 Jun 02 j 08:25 23°**8**44'21 -2002 Jan 16 j 07:48 22°**Y**32'55 behind sun end -1996 Jun 02 j 21:52 23°**8**46'21 direct -1996 Jun 01 j 15:38 23°841'47 19.69171 AU max. Earth dist. $-2002 \text{ May } 05 \text{ j } 18:58 \quad 26^{\circ} \Upsilon 45'11 \quad 0^{\circ} -21'-1$ -1996 Jun 27 j 13:31 25°**8**14'55 conjunction asc. node -1996 Sep 20 i 06:28 28°805'35 minimum elong $-2002 \text{ May } 05 \text{ i } 18:58 \quad 26^{\circ} \Upsilon 45'11 \quad 0^{\circ} 21'01$ retrograde $-2002 \text{ May } 05 \text{ j } 05:51 \quad 26^{\circ} \Upsilon 43'14 \quad 20.08978 \text{ AU}$ max. Earth dist. opposition -1996 Dec 03 i 03:21 26°803'13 0°01'46 -2002 Jul 06 i 11:53 0°8 min. Earth dist. -1996 Dec 03 j 23:47 26°800'59 17.66126 AU -2002 Aug 24 j 08:38 1°800'20 direct -1995 Feb 16 j 07:57 23°858'50 retrograde -2002 Oct 13 j 01:06 30°R℃ -2002 Nov 07 j 04:14 28°**Υ**'58'14 0°-21'-33 -1995 Jun 07 j 17:16 28°\begin{aligned} 28°\begin{aligned} 22'30 & 0°03'31 \end{aligned} opposition conjunction -2002 Nov 07 j 16:12 28° Υ 56'57 18.05426 AU min. Earth dist. minimum elong -2001 Jan 20 j 21:11 26° Y 55'56 direct behind sun begin -1995 Jun 07 j 10:33 28°**8**21'30 -2001 Apr 20 j 22:14 0° 8 behind sun end -1995 Jun 08 j 00:01 28°**8**23'31 max. Earth dist. -1995 Jun 06 j 14:58 28°**8**18'29 19.63119 AU -2001 May 10 j 16:03 1°**8**09'51 0°-17'-49 -1995 Jul 04 j 20:15 $0^{\circ}\Pi$ conjunction -2001 May 10 j 16:03 1°809'51 0°17'49 -1995 Sep 25 j 03:47 2°**Ⅱ**43'25 minimum elong retrograde -2001 May 10 j 00:15 1°**8**07'30 20.01938 AU -1995 Dec 07 j 22:13 0°**П**40'59 0°05'52 max. Earth dist. opposition -2001 Aug 29 j 02:54 5°**8**25'55 -1995 Dec 08 j 20:22 retrograde min. Earth dist. 0°**Д**38'35 17.60192 AU -2001 Nov 11 j 17:58 3°**8**23'42 0°-17'-57 -1995 Dec 23 j 20:57 30°₹**८** opposition min. Earth dist. -2001 Nov 12 j 07:01 3°**8**22'18 17.98468 AU direct -1994 Feb 21 j 05:20 28° **8**36'14 direct -2000 Jan 25 j 12:45 1°**8**21'02 -1994 Apr 19 j 20:33 Π $^{\circ}0$ -2000 May 14 j 14:08 5°**8**36'37 0°-14'-30 -1994 Jun 12 j 19:58 3°**I**101'21 0°07'11 conjunction conjunction -2000 May 14 j 14:08 5°**8**36'37 0°14'30 -1994 Jun 12 j 19:58 3°**II**01'21 0°07'13 minimum elong minimum elong

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -1994 in astronomical counting style is the year 1995 BCE in historical counting style. behind sun begin -1994 Jun 12 j 13:45 3°**Ⅱ**00′25 opposition -1986 Jan 14 i 06:07 8°9529'13 0°35'40 8°526'27 17.27708 AU -1994 Jun 13 j 02:11 3°**Ⅱ**02'17 min. Earth dist. -1986 Jan 15 j 07:17 behind sun end -1994 Jun 11 j 17:23 2°**Д**57'16 19.57298 AU -1986 Mar 31 j 09:42 max. Earth dist. direct 6°522'24 -1994 Sep 30 j 03:04 7°**Ⅲ**22'52 -1986 Jul 20 j 22:51 10°550'47 19.26887 AU max. Earth dist. retrograde -1994 Dec 12 j 17:46 5°II20'23 0°09'58 opposition -1994 Dec 13 j 16:26 -1986 Jul 22 j 03:38 10°555'19 0°33'20 min. Earth dist. 5°**Ⅱ**17'54 17.54507 AU conjunction -1993 Feb 26 j 04:02 -1986 Jul 22 j 03:38 10°555'19 direct 3°**Ⅱ**15'15 minimum elong 0°33'23 -1986 Nov 07 j 01:09 15°519'25 retrograde 7°**II**41'42 0°10'50 -1985 Jan 19 j 06:54 13°516'53 conjunction -1993 Jun 17 j 23:04 opposition 0°38'35 -1993 Jun 17 j 23:04 minimum elong 7°**Ⅱ**41'42 0°10'52 min. Earth dist. -1985 Jan 20 j 06:41 13°514'17 17.26305 AU behind sun begin -1993 Jun 17 j 17:59 7°**Ⅱ**40'56 direct -1985 Apr 05 j 14:17 11°510'04 -1993 Jun 18 j 04:09 7°**Ⅱ**42'28 -1985 Jul 26 j 04:50 15°\$39'08 19.25785 AU behind sun end max. Earth dist. max. Earth dist. -1993 Jun 16 j 18:26 7°**Д**37'18 19.51768 AU retrograde -1993 Oct 05 j 00:47 12°**Ⅲ**03'47 conjunction -1985 Jul 27 j 08:02 15°543'25 0°35'50 opposition -1993 Dec 17 j 14:02 10°**Д**01'13 0°14'01 minimum elong -1985 Jul 27 j 08:02 15°543'25 0°35'53 min. Earth dist. -1993 Dec 18 j 14:20 9°**Ⅲ**58'33 17.49166 AU retrograde -1985 Nov 12 j 00:57 20°507'31 direct -1992 Mar 02 j 01:59 7°**Ⅱ**55'43 opposition -1984 Jan 24 j 08:14 18°505'08 0°41'15 max. Earth dist. -1992 Jun 20 j 21:57 12°**Ⅱ**18'59 19.46613 AU min. Earth dist. -1984 Jan 25 j 08:26 18°502'29 17.25501 AU direct -1984 Apr 09 j 17:30 15°558'21 conjunction -1992 Jun 22 j 02:40 12°**Ⅲ**23'26 0°14'25 max. Earth dist. -1984 Jul 30 j 08:39 20°\$27'39 19.25271 AU minimum elong -1992 Jun 22 j 02:40 12°**Ⅲ**23'26 behind sun begin -1992 Jun 21 j 23:51 12°**Д**23'00 conjunction -1984 Jul 31 i 12:10 20°532'00 0°38'06 behind sun end -1992 Jun 22 i 05:28 12°**Ⅲ**23'51 minimum elong -1984 Jul 31 j 12:10 20°531'59 0°38'08 retrograde -1992 Oct 09 i 01:37 16°**I**45'58 retrograde -1984 Nov 16 j 02:34 24°\$56'03 opposition -1992 Dec 21 j 10:59 14°**II**43'20 0°17'59 opposition -1983 Jan 28 j 10:02 22°\$53'48 0°43'38 min. Earth dist. -1992 Dec 22 j 11:14 14°**Д**40'40 17.44212 AU min. Earth dist. -1983 Jan 29 j 08:58 22°551'18 17.25265 AU -1991 Mar 07 j 02:32 12°**Ⅲ**37'30 direct -1983 Apr 14 j 22:46 20°547'03 direct max. Earth dist. -1991 Jun 26 j 00:40 17°**I**I01'44 19.41877 AU -1983 Aug 05 j 16:08 25°\$20'49 conjunction 0°40'05 -1991 Jun 27 j 06:30 17°**II**06'22 0°17'55 -1983 Aug 05 j 16:08 25°520'49 0°40'08 conjunction minimum elong -1991 Jun 27 j 06:30 17°**Ⅲ**06'22 -1983 Aug 04 j 14:36 25°\$16'47 19.25294 AU max. Earth dist. minimum elong -1983 Nov 21 j 02:57 29°544'44 -1991 Oct 13 j 23:30 21°**Ⅲ**29'19 retrograde retrograde -1991 Dec 26 j 08:43 19°**Ц**26'37 0°21'51 -1982 Feb 02 j 12:25 27°542'37 0°45'42 opposition opposition -1991 Dec 27 j 10:18 19°**II**23'48 17.39733 AU -1982 Feb 03 j 11:12 27°540'08 17.25547 AU min. Earth dist. min. Earth dist. -1990 Mar 12 j 01:45 17°**Ⅲ**20'27 -1982 Apr 20 j 03:03 25°535'57 direct direct -1990 Jul 01 j 04:49 21°**Д**45'44 19.37659 AU -1982 Aug 08 j 06:41 0°**Ω** max. Earth dist. conjunction -1990 Jul 02 j 10:33 21°**Ⅲ**50'22 0°21'19 conjunction -1982 Aug 10 j 19:38 0°Ω09'40 0°41'48 minimum elong -1990 Jul 02 j 10:33 21°**Ⅲ**50'22 minimum elong -1982 Aug 10 j 19:38 0°Ω09'39 0°41'50 retrograde -1990 Oct 19 j 00:37 26°**Ⅲ**13'40 max. Earth dist. -1982 Aug 09 j 17:56 0°**Ω**05'35 19.25839 AU opposition -1990 Dec 31 j 07:05 24°**Ц**10'55 0°25'34 retrograde -1982 Nov 26 j 04:25 4°**Ω**33'21 min. Earth dist. -1989 Jan 01 j 07:52 24°**Д**08'12 17.35794 AU -1981 Feb 07 j 14:54 2°**Ω**31'20 0°47'27 opposition -1989 Mar 17 j 03:45 22°**Ⅲ**04'30 min. Earth dist. -1981 Feb 08 j 12:27 2°\$\Omega 29'00 17.26352 AU direct max. Earth dist. -1989 Jul 06 j 08:55 26°**Д**30'42 19.34004 AU -1981 Apr 25 j 08:08 0°**Ω**24'45 direct -1989 Jul 07 j 14:39 26°**Ⅲ**35'20 0°24'35 4°Ω58'15 0°43'13 conjunction conjunction -1981 Aug 15 j 22:46 -1989 Jul 07 j 14:38 26°**Ⅲ**35'20 0°24'37 -1981 Aug 15 j 22:46 minimum elong minimum elong 4°Ω58'15 0°43'15 -1989 Sep 07 j 11:13 0ಂತಾ max. Earth dist. -1981 Aug 14 i 23:19 4°Ω54'32 19.26888 AU -1989 Oct 23 i 22:58 retrograde 0°958'55 retrograde -1981 Dec 01 i 05:05 9°**Ω**21'37 -1989 Dec 10 i 18:02 30°RⅡ opposition -1980 Feb 12 i 17:41 7°Ω19'43 0°48'51 7°**Ω**17'28 17.27635 AU -1988 Jan 05 j 06:12 28° **II** 56'10 0°29'08 min. Earth dist. -1980 Feb 13 j 14:29 opposition min. Earth dist. -1988 Jan 06 j 07:56 28° **II**53'20 17.32455 AU direct -1980 Apr 29 j 12:23 5°Ω13'15 direct -1988 Mar 21 j 04:21 26°**Ⅲ**49'33 max. Earth dist. -1980 Aug 19 j 02:03 9°**Ω**42'40 19.28423 AU -1988 Jun 19 j 21:21 0ಂತಾ conjunction -1980 Aug 20 j 01:16 9°**Ω**46'21 0°44'19 conjunction -1988 Jul 11 j 18:58 1°521'12 0°27'42 minimum elong -1980 Aug 20 j 01:16 9°**Ω**46'21 0°44'21 -1980 Dec 05 j 06:02 14°**Ω**09'20 -1988 Jul 11 j 18:58 1°521'12 0°27'44 retrograde minimum elong -1988 Jul 10 j 13:16 -1979 Feb 16 j 20:28 12° Ω 07'30 0°49'54 max. Earth dist. 1°516'32 19.30983 AU opposition -1988 Oct 28 j 00:20 -1979 Feb 17 j 16:07 12°**Ω**05'23 17.29423 AU retrograde 5°9545'00 min. Earth dist. -1987 Jan 09 j 05:42 -1979 May 04 j 17:07 $10^{\circ}\Omega$ 01'08 opposition 3°542'16 0°32'30 direct -1979 Aug 24 j 06:28 14° Ω 30'24 19.30466 AU min. Earth dist. -1987 Jan 10 j 06:14 3°939'35 17.29755 AU max. Earth dist. direct -1987 Mar 26 j 07:54 1°935'32 conjunction -1979 Aug 25 j 03:15 14° Ω33'42 0°45'07 conjunction -1987 Jul 16 j 23:28 6°907'53 0°30'37 minimum elong -1979 Aug 25 j 03:15 14° Ω33'42 0°45'08 minimum elong -1987 Jul 16 j 23:28 6°**©**07'53 0°30'39 -1979 Sep 01 j 01:11 15°**Ω** -1987 Jul 15 j 18:41 6°503'22 19.28604 AU -1979 Dec 10 j 06:14 18° **Ω**56'11 max. Earth dist. retrograde retrograde -1987 Nov 01 j 23:24 10°531'51 -1978 Feb 21 j 23:23 $16^{\circ}\Omega$ 54'26 0° 50'37 opposition

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -1978 in astronomical counting style is the year 1979 BCE in historical counting style. -1978 Feb 22 j 17:27 $16^{\circ}\Omega$ 52'30 17.31708 AU min. Earth dist. retrograde -1970 Jan 16 j 12:15 26° m 22'47 -1978 Apr 18 j 13:35 15°RΩ -1970 Apr 01 j 14:13 24° m/22'01 0°44'05 opposition min. Earth dist. -1978 May 09 j 21:29 $14^{\circ}\Omega 48'14$ -1970 Apr 01 j 15:45 24° Mp 21'52 17.69100 AU direct -1978 May 31 j 01:30 15°**Ω** -1970 Jun 17 j 21:43 22° Mp 18'21 direct -1978 Aug 29 j $08{:}27\quad 19^{\circ} \Omega 16{'}56\quad 19.33018 \; \mathrm{AU}$ max. Earth dist. -1970 Oct 06 j 06:14 26° mp 40'31 0°38'40 conjunction -1978 Aug 30 j 04:11 19°**Ω**20'04 0°45'35 -1970 Oct 06 j 06:14 26° Mp 40'31 0°38'40 conjunction minimum elong -1978 Aug 30 j 04:11 19°**Ω**20'04 -1970 Oct 06 j 05:17 26° Mp 40'22 19.72342 AU minimum elong 0°45'37 max. Earth dist. -1978 Dec 15 j 05:56 23°**Ω**42'01 retrograde -1970 Dec 06 j 03:34 0∘**⊽** opposition -1977 Feb 27 j 02:10 21° Ω 40'18 0°50'58 retrograde -1969 Jan 21 j 06:54 0°**£**56'33 min. Earth dist. -1977 Feb 27 j 19:03 21° **Ω**38'30 17.34529 AU -1969 Mar 10 j 15:35 30°₽,₩ -1969 Apr 06 j 14:28 28° M 55'58 0°41'55 direct -1977 May 15 j 01:56 19° Ω 34'15 opposition -1977 Sep 03 j 11:17 $24^{\circ}\Omega$ 02'30 19.36113 AU -1969 Apr 06 j 15:02 28° M 55'55 17.75626 AU max. Earth dist. min. Earth dist. direct -1969 Jun 22 j 20:22 26° M 52'45 conjunction -1977 Sep 04 j 04:31 24° **Ω**05'14 0°45'45 -1969 Sep 21 j 01:08 0∘<u>ଫ</u> minimum elong -1977 Sep 04 j 04:31 24° **Ω**05'14 0°45'46 retrograde -1977 Dec 20 j 04:47 $28^{\circ}\Omega 26'33$ conjunction -1969 Oct 10 j 23:34 1°**₽**13'22 0°36'37 opposition -1976 Mar 03 j 04:36 $26^{\circ}\Omega$ 24'55 $0^{\circ}50'58$ minimum elong -1969 Oct 10 j 23:34 1°**♀**13'22 0°36'36 min. Earth dist. -1976 Mar 03 j 19:09 $26^{\circ}\Omega$ 23'22 17.37885 AU max. Earth dist. -1969 Oct 10 j 23:46 1°**2**13'24 19.78969 AU direct -1976 May 19 j 06:56 $24^{\circ}\Omega$ 19'04 retrograde -1968 Jan 26 j 03:01 5°**£**28'31 opposition -1968 Apr 10 j 13:54 3°**£**28'07 0°39'29 conjunction -1976 Sep $08 \text{ i } 03:58 \quad 28^{\circ} \Omega 49'04 \quad 0^{\circ}45'36$ min. Earth dist. -1968 Apr 10 j 11:36 3°**2**28'21 17.82328 AU minimum elong -1976 Sep $08 \text{ i } 03:58 \quad 28^{\circ} \Omega 49'04 \quad 0^{\circ}45'37$ direct -1968 Jun 26 i 20:24 1°**£**25'19 max. Earth dist. -1976 Sep 07 j 12:33 $28^{\circ}\Omega 46'38$ 19.39753 AU -1976 Sep 27 j 01:38 0° m conjunction -1968 Oct 14 j 16:12 5°**-**44′22 0°34'20 -1976 Dec 24 j 02:39 3°m09'43 -1968 Oct 14 j 16:12 5°**£**44'22 0°34'20 retrograde minimum elong opposition -1975 Mar 08 j 07:06 1° m 08'09 0° 50'37 max. Earth dist. -1968 Oct 14 j 19:21 5°**2**44'51 19.85731 AU min. Earth dist. -1975 Mar 08 j 20:21 1° Mp 06'45 17.41816 AU retrograde -1967 Jan 29 j 20:43 9°**£**58'38 -1975 Apr 05 j 10:18 30°RΩ -1967 Apr 15 j 13:04 opposition 7°**2**58'22 0°36'50 -1975 May 24 j 10:39 $29^{\circ}\Omega 02'33$ min. Earth dist. -1967 Apr 15 j 09:45 direct 7°**♀**58'43 17.89135 AU -1967 Jul 01 j 18:08 -1975 Jul 10 j 20:40 direct 5°**£**56'01 0° m -1967 Oct 19 j 07:39 10° **2**13'25 0°31'52 -1975 Sep 13 j 02:26 3° m 31'27 0°45'09 conjunction conjunction -1967 Oct 19 j 07:39 10° **2**13'25 0°31'51 -1975 Sep 13 j 02:26 3° mp 31'27 0°45'10 minimum elong minimum elong 3° m 29'25 19.43976 AU -1975 Sep 12 j 13:31 -1967 Oct 19 j 11:44 10° **2**14'02 19.92578 AU max. Earth dist. max. Earth dist. -1975 Dec 29 j 00:48 7° m 51'24 -1966 Feb 03 j 15:13 14°**£**26'48 retrograde retrograde -1974 Mar 13 j 09:15 5° m 49'57 0°49'56 -1966 Apr 20 j 11:23 12°**2**26'39 0°33'58 opposition opposition min. Earth dist. -1974 Mar 13 j 19:25 5° Mp 48'52 17.46310 AU min. Earth dist. -1966 Apr 20 j 05:25 12°**2**27'16 17.96005 AU direct -1974 May 29 j 15:12 3° m 44'39 direct -1966 Jul 06 j 16:22 10°**2**24'42 conjunction -1974 Sep 18 j 00:09 8° m 12'21 0°44'24 conjunction -1966 Oct 23 j 22:29 14°**£**40'27 0°29'13 -1974 Sep 18 j 00:09 8° m 12'21 0°44'24 -1966 Oct 23 j 22:29 14°**♀**40'27 0°29'13 minimum elong minimum elong max. Earth dist. -1974 Sep 17 j 13:43 8° Mp 10'43 19.48751 AU max. Earth dist. -1966 Oct 24 j 05:29 14° **2**41'32 19.99456 AU -1973 Jan 02 j 21:21 12° M 31'35 -1965 Feb 08 j 07:37 18°**♀**52'56 retrograde retrograde -1973 Mar 18 j 11:01 10° m 30'16 0°48'56 -1965 Apr 25 j 08:52 16°**♀**52'52 0°30'55 opposition opposition -1973 Mar 18 j 19:58 10° m 29'20 17.51356 AU -1965 Apr 25 j 01:48 16° **2**53'36 18.02884 AU min. Earth dist. min. Earth dist. direct -1973 Jun 03 i 17:04 8°m 25'20 direct -1965 Jul 11 j 13:12 14°**£**51'18 -1973 Sep 22 j 20:57 12° m 51'46 0°43'22 -1965 Oct 28 j 12:11 19°**£**05'23 0°26'25 conjunction conjunction minimum elong -1973 Sep 22 i 20:58 12° m 51'46 0°43'24 minimum elong -1965 Oct 28 i 12:11 19° \(\Omega\) 05'23 0°26'24 max. Earth dist. -1973 Sep 22 j 12:34 12° mp 50'27 19.54060 AU max. Earth dist. -1965 Oct 28 j 19:58 19° **2**06'34 20.06346 AU retrograde -1972 Jan 07 j 19:09 17° mp 10'13 retrograde -1964 Feb 13 j 00:17 23° **2**16'58 -1972 Mar 22 j 12:24 15° mp 09'05 0°47'37 -1964 Apr 29 j 05:38 21° **2**16'58 0°27'42 opposition opposition min. Earth dist. -1972 Mar 22 j 18:11 15° Mp 08'29 17.56883 AU min. Earth dist. -1964 Apr 28 j 20:10 21° **2**17'56 18.09778 AU -1964 Jul 15 j 09:14 19°**2**15'46 direct -1972 Jun 07 j 20:14 13° Mp 04'33 direct conjunction -1972 Sep 26 j 16:56 17° m 29'38 0°42'04 conjunction -1964 Nov 01 j 00:58 23°**£**28'11 0°23'28 -1972 Sep 26 j 16:56 17° Mp 29'38 0°42'04 minimum elong -1964 Nov 01 j 00:58 23°**2**28'11 0°23'27 minimum elong -1972 Sep 26 j 11:22 17° m 28'46 19.59803 AU max. Earth dist. -1964 Nov 01 j 11:52 23°**2**29'50 20.13238 AU max. Earth dist. -1971 Jan 11 j 14:47 21° Mp 47'18 -1963 Feb 16 j 15:21 27°**2**38'51 retrograde retrograde -1971 Mar 27 j 13:36 19° Mp 46'22 -1963 May 04 j 01:41 25°**2**38'55 opposition 0°46'00 opposition 0°24'22 min. Earth dist. -1971 Mar 27 j 18:16 19° m 45'53 17.62822 AU min. Earth dist. -1963 May 03 j 14:41 25°**2**40'02 18.16674 AU direct -1971 Jun 12 j 20:10 17° Mp 42'15 direct -1963 Jul 20 j 05:09 23°**△**38'05 conjunction -1971 Oct 01 j 12:00 22° m 05'55 0°40'29 conjunction -1963 Nov 05 j 12:46 27°**△**48'50 0°20'26 minimum elong -1971 Oct 01 j 12:00 22° m 05'55 0°40'30 -1963 Nov 05 j 12:46 27°**♀**48'50 0°20'25

minimum elong

-1963 Nov 06 j 00:36 27°**♀**50'37 20.20152 AU

max. Earth dist.

max. Earth dist.

-1971 Oct 01 j 08:05 22° m 05'18 19.65931 AU

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retrograde	-1902 Feb 21 J 00.00	1 1163030	0000155	minimum elong	-1930 Dec 04 j 03.41		0 02 33
opposition	-1962 May 08 j 20:46	29° ≏ 58'44	0°20'55	behind sun begin	-1956 Dec 03 j 21:10		
min. Earth dist.	-1962 May 08 j 07:30	0°M00'05	18.23614 AU	behind sun end	-1956 Dec 04 j 10:12	27°M23'01	
	-1962 May 08 j 08:23	30° Ŗ Ω		max. Earth dist.	-1956 Dec 05 j 03:42	27°M25'37	20.67384 AU
direct	-1962 Jul 24 j 22:51	27° £ 58'15			-1955 Jan 21 j 12:56	0° ⊼ ¹	
	-1962 Oct 04 j 04:27	0°M		retrograde	-1955 Mar 22 j 19:43	1° ∡ 126'46	
	-1702 Oct 0+j 04.27	O IIG		retrograde	3		
					-1955 May 25 j 22:15	30°RM	
conjunction	-1962 Nov 09 j 23:52	2°M07'24	0°17'18	opposition	-1955 Jun 08 j 12:54	29°M27'42	0°-4'-33
minimum elong	-1962 Nov 09 j 23:52	2° ™ 07'24	0°17'16	min. Earth dist.	-1955 Jun 07 j 13:10	29°M30'04	18.70389 AU
max. Earth dist.	-1962 Nov 10 j 14:46	2°M09'39	20.27098 AU	direct	-1955 Aug 24 j 03:09	27° M 29'57	
retrograde	-1961 Feb 25 j 19:52	6°M₁6′20			-1955 Nov 12 j 13:30	0° ∡ ¹	
opposition	-1961 May 13 j 15:02	4°M16'32	0°17'23				
* *	• •				1055 D 00:10.22	10.720110	00.51.40
min. Earth dist.	-1961 May 13 j 00:00	4°M18'04	18.30566 AU	conjunction	-1955 Dec 08 j 10:32	1° ₹ 29'19	0°-5'-48
direct	-1961 Jul 29 j 16:59	2°M16'27		minimum elong	-1955 Dec 08 j 10:32	1° × 729'19	0°05'51
				behind sun begin	-1955 Dec 08 j 04:17	1° ₹ 28'26	
conjunction	-1961 Nov 14 j 10:00	6° ™ 24'01	0°14'06	behind sun end	-1955 Dec 08 j 16:47	1° ∡ ³30′13	
minimum elong	-1961 Nov 14 j 09:59	6°M24'01	0°14'04	max. Earth dist.	-1955 Dec 09 j 10:29	1° ∡ 732'51	20.73283 AU
behind sun begin	-1961 Nov 14 j 06:35	6°M23'31	0 1.0.	retrograde	-1954 Mar 27 j 06:15	5° ₹ '33'26	20.70200110
_	,			-	•		10.76100 411
behind sun end	-1961 Nov 14 j 13:24	6° M 24'31		min. Earth dist.	-1954 Jun 12 j 02:16		18.76108 AU
max. Earth dist.	-1961 Nov 15 j 01:42	6°M26'23	20.34055 AU	opposition	-1954 Jun 13 j 02:06	3° ҂ ³34'26	0°-8'-10
retrograde	-1960 Mar 01 j 09:10	10°M32'09		direct	-1954 Aug 28 j 12:29	1° х 36′59	
opposition	-1960 May 17 j 08:29	8°M32'27	0°13'47				
min. Earth dist.	-1960 May 16 j 15:33		18.37530 AU	conjunction	-1954 Dec 12 j 17:09	5° ∡ ³35'14	0°-9'-2
direct	-1960 Aug 02 j 08:17	6°M32'45	10.57550710	minimum elong	-1954 Dec 12 j 17:09	5° × 35'14	
direct	-1900 Aug 02 J 06.17	0 1163243		2			0 09 04
				behind sun begin	-1954 Dec 12 j 11:33	5° ∡ ³34′26	
conjunction	-1960 Nov 17 j 19:37	10°M38'49	0°10'51	behind sun end	-1954 Dec 12 j 22:45	5° ₹ 36′02	
minimum elong	-1960 Nov 17 j 19:38	10°M38'49	0°10'48	max. Earth dist.	-1954 Dec 13 j 18:38	5° ∡ '38'58	20.78784 AU
behind sun begin	-1960 Nov 17 j 14:34	10°M38'04		retrograde	-1953 Mar 31 j 16:30	9° × 38'47	
behind sun end	-1960 Nov 18 j 00:41	10°M39'33		opposition	-1953 Jun 17 j 14:35		0°-11'-44
	•		20 41002 ATT		•		
max. Earth dist.	-1960 Nov 18 j 14:11		20.41002 AU	min. Earth dist.	-1953 Jun 16 j 13:37		18.81382 AU
retrograde	-1959 Mar 05 j 21:34	14°M46'10		direct	-1953 Sep 02 j 00:13	5° х¹ 42'39	
min. Earth dist.	-1959 May 21 j 06:29	12° M 48'29	18.44444 AU				
opposition	-1959 May 22 j 01:14	12°M46'36	0°10'08	conjunction	-1953 Dec 16 j 23:06	9° ∡ ³39'48	0°-12'-12
direct	-1959 Aug 07 j 00:14	10° M 47'19		minimum elong	-1953 Dec 16 j 23:06	9° ∡ ³39'48	0°12'16
	-, -,			behind sun begin	-1953 Dec 16 j 18:40	9° ∡ ³39'10	
	1050 N 22 : 04-20	1.40 m = 1155	0907122		-		
conjunction	-1959 Nov 22 j 04:20		0°07'33	behind sun end	-1953 Dec 17 j 03:33	9° ∡ 740′26	
minimum elong	-1959 Nov 22 j 04:19		0°07'32	max. Earth dist.	-1953 Dec 18 j 00:15	9° ≯ 43′28	20.83826 AU
behind sun begin	-1959 Nov 21 j 22:21	14°M51'03		retrograde	-1952 Apr 04 j 01:52	13° ∡ ′42'51	
behind sun end	-1959 Nov 22 j 10:17	14°M52'47		min. Earth dist.	-1952 Jun 20 j 01:51	11° ∡ ¹46′22	18.86204 AU
max. Earth dist.	-1959 Nov 22 j 23:32		20.47875 AU	opposition	-1952 Jun 21 j 02:34	11° ∡ ⁴43'54	
man. Darun dibe.	-1959 Nov 24 j 10:26		20.17070110	direct	-1952 Sep 05 j 08:25	9° × 146'55	0 10 12
. 1				unect	-1932 Sep 03 J 08.23	9 8 40 33	
retrograde	-1958 Mar 10 j 10:14					_	
opposition	-1958 May 26 j 17:15	16°M59'06	0°06'28	conjunction	-1952 Dec 20 j 04:55	13° ≯ ⁴43′03	0°-15'-17
min. Earth dist.	-1958 May 25 j 21:09	17° M 01'07	18.51266 AU	minimum elong	-1952 Dec 20 j 04:55	13° ҂ 43′02	0°15'20
direct	-1958 Aug 11 j 13:23	15°M00'14		behind sun begin	-1952 Dec 20 j 02:42	13° ∡ 42'44	
				behind sun end	-1952 Dec 20 j 07:08	13° ∡ ¹43'21	
conjunction	-1958 Nov 26 j 12:44	10°M 02'26	0°04'15	max. Earth dist.	-1952 Dec 21 j 07:27		20.88418 AU
·	·				-		20.00410 AU
minimum elong	-1958 Nov 26 j 12:44	19°M03'26	0°04'13	retrograde	-1951 Apr 08 j 11:21	17° ∡ ¹45'36	
behind sun begin	-1958 Nov 26 j 06:18	19°M02'31		min. Earth dist.	-1951 Jun 24 j 11:52	15° ∡ ¹49'13	18.90568 AU
behind sun end	-1958 Nov 26 j 19:10	19°M04'22		opposition	-1951 Jun 25 j 13:42	15° х 46′38	0°-18'-35
max. Earth dist.	-1958 Nov 27 j 10:22	19°M06'39	20.54612 AU	direct	-1951 Sep 09 j 18:55	13° ∡ ¹49'49	
retrograde	-1957 Mar 14 j 21:20						
•			10.57001 ATT	. ,.	1051 D 24:10.00	170 744150	00 101 17
min. Earth dist.	-1957 May 30 j 10:42			conjunction	-1951 Dec 24 j 10:09		0°-18'-17
opposition	-1957 May 31 j 08:19		0°02'46	minimum elong	-1951 Dec 24 j 10:09	17° х¹ 44'59	0°18'21
direct	-1957 Aug 16 j 03:13	19° M 11'36		max. Earth dist.	-1951 Dec 25 j 12:19	17° ∡ ¹48'46	20.92562 AU
				retrograde	-1950 Apr 12 j 19:48	21° ∡ ¹47′06	
conjunction	-1957 Nov 30 j 20:24	23°M.13'28	0°00'53	min. Earth dist.			18.94514 AU
	·				-1950 Jun 30 j 00:16		
minimum elong	-1957 Nov 30 j 20:25		0°00'51	opposition	3		0°-21'-51
behind sun begin	-1957 Nov 30 j 13:53			direct	-1950 Sep 14 j 02:08	1/~ x '51'24	
behind sun end	-1957 Dec 01 j 02:56	23°M14'24					
max. Earth dist.	-1957 Dec 01 j 18:20	23°M16'43	20.61134 AU	conjunction	-1950 Dec 28 j 15:15	21° ∡ ¹45'42	0°-21'-11
desc. node	-1956 Mar 04 j 15:40			minimum elong	-1950 Dec 28 j 15:15		0°21'15
retrograde	-1956 Mar 18 j 09:02			max. Earth dist.	-1950 Dec 29 j 18:42		
-			00001 54		-		20.70303 AU
opposition	-1956 Jun 03 j 22:59	23 IIL1933	0°00'-54	retrograde	-1949 Apr 17 j 04:22	23 X'4/25	
	·						
min. Earth dist.	-1956 Jun 03 j 00:37		18.64305 AU	min. Earth dist.	-1949 Jul 03 j 07:23		
min. Earth dist. direct	v		18.64305 AU	min. Earth dist. opposition	-1949 Jul 03 j 07:23 -1949 Jul 04 j 09:55		
	-1956 Jun 03 j 00:37		18.64305 AU		,		

Attention, astronomical year style is used: The year -1949 in astronomical counting style is the year 1950 BCE in historical counting style. -1949 Sep 18 j 10:55 21° ₹ 51'48 direct direct -1941 Oct 20 j 06:26 23°る33'58 -1948 Jan 01 j 19:56 25° **₹** 45'20 0°-23'-58 -1940 Feb 02 j 09:53 27°る25'03 0°-40'-54 conjunction conjunction -1948 Jan 01 j 19:56 25° ₹ 45'20 0°24'01 -1940 Feb 02 j 09:52 27°る25'03 0°40'57 minimum elong minimum elong -1948 Jan 02 j 23:00 25° ₹ 49'15 20.99670 AU -1940 Feb 03 j 11:11 27°る28'39 21.12670 AU max. Earth dist. max. Earth dist. -1948 Apr 20 j 12:13 29° ₹ 46'45 -1940 Mar 22 j 15:04 retrograde 0°≈ -1948 Jul 07 j 19:17 27° **₹** 47'39 0°-27'-59 -1940 May 23 j 04:55 opposition retrograde 1°≈26′14 -1940 Jul 26 j 10:24 min. Earth dist. -1948 Jul 06 j 17:15 27° ₹ 50'15 19.01268 AU 30°Ŗる direct -1948 Sep 21 j 16:57 25° ₹ 51'12 min. Earth dist. -1940 Aug 08 j 08:08 29°**궁**29'22 19.12480 AU opposition -1940 Aug 09 j 06:48 29°る27'05 0°-45'-56 conjunction -1947 Jan 05 j 00:31 29° **₹** 44'04 0°-26'-37 direct -1940 Oct 23 j 09:25 27°**궁**31'13 -1947 Jan 05 j 00:31 -1939 Jan 12 j 00:47 minimum elong 29°**∡**¹44'04 0°26'41 -1947 Jan 06 j 04:48 29°**尽**48'09 21.02700 AU max. Earth dist. -1947 Jan 09 j 15:04 0°궁 conjunction -1939 Feb 05 j 15:39 1°≈22'24 0°-42'-13 retrograde -1947 Apr 24 j 20:41 3°**る**45'14 minimum elong -1939 Feb 05 j 15:39 1°≈22'24 0°42'16 min. Earth dist. -1947 Jul 11 j 00:47 1°る48'50 19.04123 AU max. Earth dist. -1939 Feb 06 j 16:34 1°≈25'56 21.12045 AU opposition -1947 Jul 12 j 03:58 1°る46'07 0°-30'-50 retrograde -1939 May 27 j 13:49 5°≈23'46 -1947 Sep 05 j 18:36 30°R ⊀ opposition -1939 Aug 13 j 13:08 3°≈24'32 0°-47'-18 direct -1947 Sep 26 i 00:06 29° ₹ 49'47 min. Earth dist. -1939 Aug 12 j 14:38 3°≈26'48 19.11547 AU -1947 Oct 15 j 22:52 direct -1939 Oct 27 j 15:58 1°≈28'35 conjunction -1946 Jan 09 i 04:58 3°る42'06 0°-29'-8 conjunction -1938 Feb 09 i 21:40 5°≈19'55 0°-43'-21 minimum elong -1946 Jan 09 i 04:58 3°る42'06 0°29'10 minimum elong -1938 Feb 09 i 21:40 5°≈19'55 0°43'24 max. Earth dist. -1946 Jan 10 j 08:39 3°る46'05 21.05377 AU max. Earth dist. -1938 Feb 10 i 20:31 5°≈23'10 21.10818 AU retrograde -1946 Apr 29 j 04:05 7°る43'05 retrograde -1938 May 31 j 21:06 9°≈21'31 -1946 Jul 15 j 09:50 5°る46'35 19.06632 AU -1938 Aug 17 j 19:18 7°≈22'08 0°-48'-25 min. Earth dist. opposition opposition -1946 Jul 16 j 12:09 5°₹43'57 0°-33'-31 min. Earth dist. -1938 Aug 16 j 23:05 7°≈24'11 19.10039 AU -1946 Sep 30 j 05:00 3°₹47'45 direct -1938 Oct 31 j 19:10 5°≈26'02 direct -1945 Jan 13 j 09:31 7°る39'37 0°-31'-30 -1937 Feb 14 j 04:02 9°≈17'37 0°-44'-16 conjunction conjunction -1945 Jan 13 j 09:31 7°る39'37 0°31'33 -1937 Feb 14 j 04:02 minimum elong 9°≈17'37 0°44'18 minimum elong -1945 Jan 14 j 14:05 7°る43'43 21.07701 AU -1937 Feb 15 j 02:25 max. Earth dist. max. Earth dist. 9°≈20'48 21.09051 AU -1945 May 03 j 12:59 11°**⋜**40'29 -1937 Jun 05 j 05:30 13°≈19'29 retrograde retrograde -1945 Jul 20 j 19:54 9°**ප්**41'22 0°-36'-3 min. Earth dist. -1937 Aug 21 j 05:14 11°≈21'59 19.08010 AU opposition -1945 Jul 19 j 16:43 9°る44'05 19.08760 AU -1937 Aug 22 j 01:18 11°≈19'57 min. Earth dist. opposition 0°-49'-19 -1945 Oct 04 j 11:05 7°る45'17 -1937 Nov 05 j 01:11 9°≈23'40 direct direct conjunction -1944 Jan 17 j 13:48 11° **궁**36'48 0°-33'-43 conjunction -1936 Feb 18 j 10:28 13°≈15'35 0°-44'-58 -1944 Jan 17 j 13:48 11° ₹36'48 0°33'46 minimum elong -1936 Feb 18 j 10:28 13°≈15'35 0°45'01 minimum elong max. Earth dist. -1944 Jan 18 j 17:35 11°정40'46 21.09629 AU max. Earth dist. -1936 Feb 19 j 06:58 13°≈18'30 21.06783 AU retrograde -1944 May 06 j 20:00 15°**⋜**37'38 -1936 Mar 21 j 01:05 15°≈ min. Earth dist. -1944 Jul 23 j 01:31 13°정41'08 19.10490 AU retrograde -1936 Jun 08 j 12:58 17°≈17'46 -1944 Jul 24 j 03:31 13°る38'32 0°-38'-25 -1936 Aug 25 j 07:23 15°≈18'04 0°-49'-59 opposition opposition direct -1944 Oct 07 j 15:14 11°**3**42'33 min. Earth dist. -1936 Aug 24 j 13:30 15°≈19'53 19.05521 AU -1936 Sep 01 j 18:18 15°R≈ -1943 Jan 20 i 18:32 15°**⋜**33'49 0°-35'-46 -1936 Nov 08 i 04:55 13°≈21'35 conjunction direct -1943 Jan 20 j 18:31 15°る33'49 0°35'50 -1935 Jan 11 i 02:29 15°≈ minimum elong -1943 Jan 21 j 22:53 15°る37'52 21.11146 AU max. Earth dist. -1943 May 11 i 05:37 19°る34'39 -1935 Feb 21 i 17:38 17°≈13'56 0°-45'-27 retrograde conjunction min. Earth dist. -1943 Jul 27 i 08:07 17° ₹38'13 19.11774 AU minimum elong -1935 Feb 21 i 17:38 17°≈13'56 0°45'30 -1943 Jul 28 i 10:33 17°₹35'34 0°-40'-36 max. Earth dist. -1935 Feb 22 j 13:40 17°≈16'47 21.04090 AU opposition direct -1943 Oct 11 j 20:58 15° ₹39'41 retrograde -1935 Jun 12 j 21:41 21°≈16'29 -1935 Aug 29 j 13:08 19°≈16'38 0°-50'-24 opposition conjunction -1942 Jan 24 j 23:21 19°₹30'48 0°-37'-39 min. Earth dist. -1935 Aug 28 j 19:27 19°≈18'25 19.02623 AU minimum elong -1942 Jan 24 j 23:21 19°る30'48 0°37'43 direct -1935 Nov 12 j 10:21 17°≈19'55 max. Earth dist. -1942 Jan 26 j 02:24 19° 중34'39 21.12187 AU -1942 May 15 j 12:23 23°**궁**31'43 retrograde conjunction -1934 Feb 26 j 01:09 21°≈12'48 0°-45'-43 -1934 Feb 26 j 01:09 21°≈12'48 -1942 Aug 01 j 17:33 21°る32'38 0°-42'-35 minimum elong opposition 0°45'46 -1942 Jul 31 j 16:51 21° ₹35'06 19.12568 AU max. Earth dist. -1934 Feb 26 j 19:11 21°≈15'21 21.01000 AU min. Earth dist. -1942 Oct 16 j 00:18 19°る36'48 -1934 Jun 17 j 05:28 25°≈15'47 direct retrograde -1934 Sep 02 j 19:11 23°≈15'47 0°-50'-35 opposition conjunction -1941 Jan 29 j 04:30 23°♂27'51 0°-39'-22 min. Earth dist. -1934 Sep 02 j 03:43 23°≈17'21 18.99355 AU minimum elong -1941 Jan 29 j 04:30 23°₹27'51 0°39'26 direct -1934 Nov 16 j 14:17 21°≈18'51 max. Earth dist. -1941 Jan 30 j 07:36 23°₹31'43 21.12713 AU conjunction retrograde -1941 May 19 j 21:53 27°る28'53 -1933 Mar 02 j 09:10 25°≈12'21 0°-45'-47 -1941 Aug 04 j 23:23 25°る32'16 19.12812 AU minimum elong -1933 Mar 02 j 09:10 25°≈12'21 0°45'49 min. Earth dist. -1941 Aug 06 j 00:07 25°る29'47 0°-44'-22 max. Earth dist. -1933 Mar 03 j 02:37 25°≈14'50 20.97565 AU opposition

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -1933 in astronomical counting style is the year 1934 BCE in historical counting style. -1933 Jun 21 j 15:11 29°≈15'50 -1925 May 13 j 04:47 retrograde -1933 Sep 06 j 09:54 27°≈17'15 18.95748 AU -1925 Jul 25 j 09:54 2°Y02'50 min. Earth dist. retrograde opposition -1933 Sep 07 j 01:10 27°≈15'42 0°-50'-32 -1925 Oct 09 j 12:27 0°Υ'01'52 0°-41'-10 opposition -1933 Nov 20 j 20:00 25°≈18'34 min. Earth dist. -1925 Oct 09 j 11:24 0°Υ01'58 18.54620 AU direct -1925 Oct 10 j 06:12 30°**₹** -1925 Dec 23 j 02:01 conjunction -1932 Mar 05 j 17:46 29°≈12'48 0°-45'-37 28°\circ 02'33 direct -1932 Mar 05 j 17:46 29°≈12'48 0°45'38 -1924 Mar 02 j 01:10 $0^{\circ}\Upsilon$ minimum elong -1932 Mar 06 j 09:11 29°≈14'59 20.93799 AU max. Earth dist. -1932 Mar 19 j 14:39 -1924 Apr 08 j 19:22 2°\bar{\gamma}05'44 0°-36'-11 0°**∀** conjunction -1924 Apr 08 j 19:22 retrograde -1932 Jun 24 j 23:36 3°**¥**16′50 minimum elong 2°Y05'44 0°36'13 -1924 Apr 08 j 18:30 2°Υ05'36 20.51302 AU opposition -1932 Sep 10 j 07:28 1° **★**16'35 0°-50'-14 max. Earth dist. -1932 Sep 09 j 18:33 -1924 Jul 28 j 22:16 6°Y15'45 min. Earth dist. 1°**升**17'55 18.91825 AU retrograde -1932 Oct 14 j 03:46 -1924 Oct 12 j 21:46 4°Υ14'36 0°-38'-54 30°R≈ opposition direct -1932 Nov 23 j 23:55 29°≈19'14 min. Earth dist. -1924 Oct 12 j 23:34 4°Υ14'25 18.47907 AU -1931 Jan 02 j 23:45 0°**)**€ direct -1924 Dec 26 j 10:12 2°Y14'52 conjunction -1931 Mar 10 j 03:11 3°**升**14'18 0°-45'-13 conjunction -1923 Apr 13 j 11:24 6°**Y**19′27 0°-34'-1 minimum elong -1931 Mar 10 j 03:11 3°¥14'18 0°45'16 minimum elong -1923 Apr 13 j 11:24 6°**Y**19′27 0°34'02 max. Earth dist. -1931 Mar 10 j 17:42 3°**升**16'22 20.89730 AU max. Earth dist. -1923 Apr 13 j 08:19 6°Υ19'00 20.44488 AU retrograde -1931 Jun 29 j 10:51 7°**)** 18'57 retrograde -1923 Aug 02 j 14:05 10°**Ƴ**30′18 opposition -1931 Sep 14 j 13:52 5°\ 18'37 0°-49'-41 opposition -1923 Oct 17 j 07:30 8°**Ƴ**28'57 0°-36'-24 min. Earth dist. -1931 Sep 14 i 01:26 5°**升**19'54 18.87586 AU min. Earth dist. -1923 Oct 17 i 10:19 8°**Υ**28'39 18.40991 AU direct -1931 Nov 28 j 06:24 3°**)** 21'03 direct -1923 Dec 30 j 21:41 6°**Y**28'47 conjunction -1930 Mar 14 j 13:15 7°**)**€17'03 0°-44'-37 conjunction -1922 Apr 18 i 04:09 10°**Υ**'34'49 0°-31'-39 -1930 Mar 14 j 13:15 7°**¥**17'03 0°44'38 minimum elong $-1922 \text{ Apr } 18 \text{ i } 04:09 \quad 10^{\circ} \Upsilon 34'49$ 0°31'40 minimum elong max. Earth dist. -1930 Mar 15 j 01:28 7°**¥**18'48 20.85327 AU max. Earth dist. -1922 Apr 17 j 23:00 10°**Υ**'34'04 20.37487 AU retrograde -1930 Jul 03 j 19:58 11°¥22'23 retrograde -1922 Aug 07 j 03:26 14°**Υ**'46'30 -1930 Sep 18 j 20:38 9°**H**21'58 0°-48'-54 -1922 Oct 21 j 17:52 12°**Υ**'44'59 0°-33'-41 opposition opposition -1930 Sep 18 j 10:50 9°**升**22'59 18.83019 AU min. Earth dist. -1922 Oct 21 j 23:15 12°Υ 44'24 18.33938 AU min. Earth dist. -1930 Dec 02 j 10:48 7°**)**€24'11 -1921 Jan 04 j 07:05 10°**Υ**'44'23 direct direct -1929 Mar 19 j 00:10 11°**)** €21'13 0°-43'-46 -1921 Apr 22 j 21:43 14° Υ'51'53 0°-29'-6 conjunction conjunction -1929 Mar 19 j 00:10 11° **∺**21'13 0°43'48 -1921 Apr 22 j 21:43 14°**Υ**51'53 0°29'06 minimum elong minimum elong -1921 Apr 22 j 14:21 14°**Υ**50'49 20.30408 AU max. Earth dist. max. Earth dist. -1921 Aug 11 j 20:31 19°**Y**04'26 -1929 Jul 08 j 08:30 15°**米**27'16 retrograde retrograde -1929 Sep 23 j 03:40 13°**¥**26'47 0°-47'-51 -1921 Oct 26 j 04:42 17°**Υ**'02'44 0°-30'-46 opposition opposition min. Earth dist. -1929 Sep 22 j 18:37 13°**)** 27'43 18.78110 AU min. Earth dist. -1921 Oct 26 j 10:59 17°**Y**02'04 18.26839 AU direct -1929 Dec 06 j 18:17 11°**∺**28'47 direct -1920 Jan 08 j 19:43 15°**Υ**01'42 conjunction -1928 Mar 22 j 11:46 15° **★**26'55 0°-42'-42 conjunction -1920 Apr 26 j 16:10 19°**Υ**10'45 0°-26'-22 -1928 Mar 22 j 11:46 15° **★**26'55 0°42'44 minimum elong -1920 Apr 26 j 16:10 19°**Υ**10'45 0°26'21 minimum elong max. Earth dist. -1928 Mar 22 j 20:10 15° **∺**28'07 20.75506 AU max. Earth dist. -1920 Apr 26 j 07:11 19°**Υ**09'26 20.23295 AU retrograde -1928 Jul 11 j 18:45 19° **∺** 33'44 retrograde -1920 Aug 15 j 11:24 23°**Y**24'10 -1928 Sep 26 j 11:19 17° ¥33'10 0°-46'-33 -1920 Oct 29 j 16:21 21° Υ 22'19 0°-27'-39 opposition opposition -1928 Sep 26 j 05:11 17° \(\) 33'48 18.72821 AU -1920 Oct 30 j 00:57 21°**Υ**'21'24 18.19735 AU min. Earth dist. min. Earth dist. -1919 Jan 12 j 06:48 19°**Y**20'51 -1928 Dec 10 j 00:00 15° ¥ 34'54 direct direct -1927 Mar 27 i 00:31 19°**)** (34'13 0°-41'-25 -1919 May 01 i 11:33 23°**Υ**'31'29 0°-23'-28 conjunction conjunction minimum elong -1927 Mar 27 i 00:31 19°\mathfrak{H}34'13 0°41'25 minimum elong $-1919 \text{ May } 01 \text{ i } 11:33 \quad 23^{\circ} \mathbf{Y}' 31'29 \quad 0^{\circ} 23'28$ max. Earth dist. -1927 Mar 27 j 06:59 19° + 35'09 20.70028 AU max. Earth dist. -1919 May 01 j 00:08 23°**Υ**29'48 20.16221 AU retrograde -1927 Jul 16 j 08:11 23° **)** 41'49 retrograde -1919 Aug 20 j 05:23 27°**Υ**45'47 -1927 Sep 30 j 19:06 21° \(\frac{1}{41}\)'08 0°-45'-1 opposition -1919 Nov 03 j 04:29 25°**Υ**'43'48 0°-24'-21 opposition -1919 Nov 03 j 14:02 25°**Υ**42'47 18.12696 AU min. Earth dist. -1927 Sep 30 j 14:03 21° \(\frac{1}{4}\)140 18.67134 AU min. Earth dist. direct -1927 Dec 14 j 08:44 19° **€** 42'33 direct -1918 Jan 16 j 20:53 23°**Y**41'56 -1926 Mar 31 j 14:01 23°**)** (43'07 0°-39'-53 conjunction conjunction -1918 May 06 j 07:52 27°**Y**54'12 0°-20'-25 -1926 Mar 31 j 14:02 23° ¥43'07 0°39'55 minimum elong -1918 May 06 j 07:52 27° **Y** 54'12 0° 20'24 minimum elong -1926 Mar 31 j 17:44 23°**)** 43'39 20.64137 AU max. Earth dist. -1918 May 05 j 19:13 27°**Υ**52'19 20.09217 AU max. Earth dist. -1926 Jul 20 j 19:34 27°**米**51'31 -1918 Jun 12 j 02:23 retrograde 0° 8 -1926 Oct 05 j 03:37 25° ¥ 50'42 0°-43'-13 retrograde opposition -1918 Aug 24 j 21:43 2°**8**09'22 min. Earth dist. -1926 Oct 05 j 01:32 25° ¥50'56 18.61049 AU opposition -1918 Nov 07 j 17:37 0°**8**07'18 0°-20'-53 direct -1926 Dec 18 j 15:52 23° **★** 51'47 min. Earth dist. -1918 Nov 08 j 05:12 0°**8**06'04 18.05747 AU -1918 Nov 10 j 13:32 30°**Ŗ**Υ 28°**Y**05′05 conjunction -1925 Apr 05 j 04:14 27° **★**53'38 0°-38'-9 direct -1917 Jan 21 j 10:01 minimum elong -1925 Apr 05 j 04:14 27° **€** 53'38 0°38'09 -1917 Mar 31 j 06:05 0°8

max. Earth dist.

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, Attention, astronomical year style is used: The year -1917 in astronomical counting style is the year 1918 BCE in historical counting style. -1917 May 11 i 04:49 2°818'57 0°-17'-13 -1911 Jun 16 j 01:40 $\Pi^{\circ}0$ conjunction -1917 May 11 j 04:49 2°**8**18'57 0°17'13 -1911 Sep 25 j 17:00 3°**I**52′12 minimum elong retrograde -1917 May 10 j 13:40 2°816'42 20.02336 AU -1911 Dec 08 j 11:39 1°**II**49'43 0°06'31 max. Earth dist. opposition min. Earth dist. -1911 Dec 09 j 09:52 -1917 Aug 29 j 16:37 6°835'03 1°**Ⅲ**47'18 17.60313 AU retrograde 4°832'54 0°-17'-16 -1917 Nov 12 j 07:23 -1910 Jan 28 j 19:56 opposition 30°₹**८** -1910 Feb 21 j 18:39 29°844'55 min. Earth dist. -1917 Nov 12 j 20:03 4°**8**31'32 17.98925 AU direct -1910 Mar 17 j 13:23 direct -1916 Jan 26 j 01:38 2°**8**30'19 Π $^{\circ}$ 0 max. Earth dist. -1910 Jun 12 j 06:19 max. Earth dist. -1916 May 14 j 10:53 6°**8**43'27 19.95562 AU 4°**Д**05'50 19.57369 AU 6°845'52 0°-13'-54 -1910 Jun 13 j 08:58 conjunction -1916 May 15 j 03:03 conjunction 4°**Ⅱ**09'55 0°07'45 6°**8**45'52 -1910 Jun 13 j 08:58 minimum elong -1916 May 15 j 03:03 0°13'54 minimum elong 4°**I**109'55 0°07'47 -1916 May 14 j 23:46 6°**8**45'23 -1910 Jun 13 j 02:53 behind sun begin behind sun begin 4°**I**109′00 -1916 May 15 j 06:20 6°846'21 -1910 Jun 13 j 15:03 behind sun end behind sun end 4°**Ⅱ**10′50 retrograde -1916 Sep 02 j 10:39 11°802'49 retrograde -1910 Sep 30 j 15:39 8°**Ⅲ**31′22 opposition -1916 Nov 15 j 21:57 9°**8**00'39 0°-13'-31 opposition -1910 Dec 13 j 07:08 6°**Ⅲ**28'49 0°10'35 min. Earth dist. -1916 Nov 16 j 12:39 8°**8**59'03 17.92205 AU min. Earth dist. -1910 Dec 14 j 05:57 6°**Ⅱ**26'19 17.54535 AU direct -1915 Jan 29 j 17:25 6°857'43 direct -1909 Feb 26 j 17:20 4°**Ⅲ**23'39 max. Earth dist. -1915 May 19 j 06:59 11°**8**12'04 19.88897 AU max. Earth dist. -1909 Jun 17 j 07:11 8°**I**45'34 19.51762 AU conjunction -1915 May 20 j 02:06 11°**8**14'56 0°-10'-28 conjunction -1909 Jun 18 j 11:53 8°**Ⅱ**49'59 0°11'22 minimum elong -1915 May 20 j 02:06 11°**8**14'56 minimum elong -1909 Jun 18 j 11:53 8°**Ⅱ**49'59 0°11'24 behind sun begin -1915 May 19 j 20:51 11°**8**14'10 behind sun begin -1909 Jun 18 i 07:02 8°**Ⅱ**49'16 behind sun end -1915 May 20 i 07:21 11°815'42 behind sun end -1909 Jun 18 i 16:44 8°**I**I50'43 -1915 Aug 03 i 00:43 15°**8** retrograde -1909 Oct 05 j 13:45 13°**II**12'01 retrograde opposition -1909 Dec 18 i 03:25 11°**I**I09'23 0°14'36 -1915 Oct 12 j 20:07 15°R min. Earth dist. -1909 Dec 19 j 03:38 11°**Д**06'44 17.49129 AU -1915 Nov 20 j 13:25 13°\(\begin{align*} \begin{al direct -1908 Mar 02 j 15:48 9°**Ⅱ**03'51 opposition -1915 Nov 21 j 05:32 13°**8**28'48 17.85593 AU max. Earth dist. -1908 Jun 21 j 10:53 13°**Д**27'03 19.46557 AU min. Earth dist. -1914 Feb 03 j 10:48 11°**8**27'15 direct -1914 May 12 j 07:10 15°**8** -1908 Jun 22 j 15:29 13°**Ⅱ**31'29 conjunction 0°14'56 -1908 Jun 22 j 15:29 13°**Д**31'29 -1914 May 24 j 06:02 15° 843'07 19.82315 AU max. Earth dist. minimum elong -1908 Jun 22 j 13:16 13°**II**31'09 behind sun begin -1914 May 25 j 02:02 15°**8**46'08 0°-6'-57 -1908 Jun 22 j 17:41 13°**Ⅲ**31'49 conjunction behind sun end -1914 May 25 j 02:01 15°**8**46'08 0°06'56 -1908 Oct 09 j 13:32 17°**Д**54'00 minimum elong retrograde -1914 May 24 j 19:44 15°**8**45'12 -1908 Dec 22 j 00:16 15°**Ц**51'19 0°18'32 behind sun begin opposition -1914 May 25 j 08:18 15°**8**47'03 -1908 Dec 23 j 00:25 15°**II**48'40 17.44148 AU behind sun end min. Earth dist. -1914 Sep 12 j 02:10 20°804'47 -1907 Mar 07 j 16:04 13°**II**45'27 retrograde direct opposition -1914 Nov 25 j 05:48 18°**8**02'31 0°-5'-40 min. Earth dist. -1914 Nov 25 j 23:38 18°**8**00'34 17.79060 AU conjunction -1907 Jun 27 j 19:17 18°**II**14'16 0°18'24 direct -1913 Feb 08 j 05:18 15°**8**58'52 minimum elong -1907 Jun 27 j 19:17 18°**II**14'16 0°18'26 max. Earth dist. -1913 May 29 j 03:36 20°**8**15'51 19.75836 AU max. Earth dist. -1907 Jun 26 j 13:30 18°**Д**09'38 19.41816 AU retrograde -1907 Oct 14 j 12:38 22° II 37'14 -1913 May 30 j 02:41 20°819'21 0°-3'-21 -1907 Dec 26 j 22:04 20° **II** 34'30 0°22'22 conjunction opposition -1913 May 30 j 02:39 20°**8**19'21 0°03'20 min. Earth dist. -1907 Dec 27 j 23:21 20° ДЗ1'43 17.39686 AU minimum elong -1913 May 29 j 19:54 20°**8**18'21 direct -1906 Mar 12 j 15:14 18°**Д**28'21 behind sun begin -1913 May 30 j 09:25 20°820'20 behind sun end -1913 Sep 16 j 22:29 24°\(\delta 38'47\) -1906 Jul 02 j 23:12 22° **II** 58'15 0°21'46 retrograde conjunction -1913 Nov 29 j 22:55 22°\(236'27\) 0°-1'-38 -1906 Jul 02 j 23:12 22°**II**58'15 0°21'48 opposition minimum elong -1913 Nov 30 j 18:19 22°834'20 17.72649 AU min. Earth dist. max. Earth dist. -1906 Jul 01 j 17:49 22° **I** 53'40 19.37630 AU direct -1912 Feb 13 i 00:39 20°832'25 retrograde -1906 Oct 19 j 13:30 27° **II**21'36 -1912 Apr 28 j 05:44 22°848'18 opposition -1906 Dec 31 j 20:25 25° **II** 18'52 0°26'03 asc node max. Earth dist. -1912 Jun 02 j 04:31 24°850'52 19.69482 AU min. Earth dist. -1905 Jan 01 j 20:54 25° **II** 16'10 17.35791 AU direct -1905 Mar 17 j 17:01 23°**Ⅲ**12'29 -1905 Jul 06 j 21:53 27° **II** 38'44 19.34033 AU conjunction -1912 Jun 03 j 04:15 24°**8**54'28 0°00'22 max. Earth dist. minimum elong -1912 Jun 03 j 04:13 24°**8**54'28 0°00'24 behind sun begin -1912 Jun 02 j 21:28 24°853'28 conjunction -1905 Jul 08 j 03:29 27°**II**43'22 0°25'00 -1912 Jun 03 j 10:59 24°**8**55'28 behind sun end minimum elong -1905 Jul 08 j 03:28 27°**Ⅲ**43'22 0°25'02 -1905 Aug 15 j 05:38 -1912 Sep 20 j 19:54 29°**8**14'37 retrograde 0.00 -1912 Dec 03 j 16:54 27°**8**12'13 0°02'26 retrograde -1905 Oct 24 j 12:47 opposition 2°907'02 -1912 Dec 04 j 13:35 27°**8**09'58 -1904 Jan 05 j 19:27 min. Earth dist. 17.66371 AU opposition 0°904'20 0°29'35 -1911 Feb 16 j 21:26 25°**8**07'49 -1904 Jan 06 j 20:53 direct min. Earth dist. 0°901'32 17.32518 AU max. Earth dist. -1911 Jun 07 j 03:46 29°**8**27'19 19.63299 AU -1904 Jan 07 j 10:55 30°R∏ direct -1904 Mar 21 j 16:49 27°**Ⅲ**57'48 conjunction -1911 Jun 08 j 06:15 29°**8**31'22 0°04'06 -1904 May 31 j 07:23 0 \circ \odot minimum elong -1911 Jun 08 j 06:15 29°**8**31'22 0°04'08 max. Earth dist. -1904 Jul 11 j 02:31 2°524'55 19.31079 AU behind sun begin -1911 Jun 07 j 23:33 29°**8**30'22 behind sun end -1911 Jun 08 j 12:56 29°832'22 -1904 Jul 12 j 07:56 2°\$29'32 0°28'04 conjunction

Planetary Phenomena of Uranus from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 34

Attention, astronomical year style is used: The year -1904 in astronomical counting style is the year 1905 BCE in historical counting style.

Attention, astronomic	ai year styl	e is used: In	ie year -1904	ın asıronomicai
minimum elong	-1904 Jul	12 j 07:56	2° 5 29'32	0°28'06
retrograde	-1904 Oct	28 j 14:14	6°953'28	
opposition	-1903 Jan	09 j 19:06	4°950'50	0°32'55
min. Earth dist.	-1903 Jan	10 j 19:24	4°9548'10	17.29873 AU
direct	-1903 Mar	26 j 20:18	2° 5 44'12	
max. Earth dist.	-1903 Jul	16 j 07:42	7° © 12'10	19.28739 AU
conjunction	-1903 Jul	17 j 12:27	7° 5 16'41	0°30'58
minimum elong	-1903 Jul	17 j 12:26	7° 5 16'41	0°31'01
retrograde	-1903 Nov	02 j 13:51	11° 5 40'49	
opposition	-1902 Jan	14 j 19:34	9° 5 38'18	0°36'02
min. Earth dist.	-1902 Jan	15 j 20:38	9° 5 35'33	17.27847 AU
direct	-1902 Mar	31 j 21:51	7° 5 31'37	
conjunction	-1902 Jul	22 j 16:55	12° 5 04'41	0°33'39
minimum elong	-1902 Jul	22 j 16:55	12° 5 04'41	0°33'42
max. Earth dist.	-1902 Jul	21 j 12:08	12° 5 00'09	19.27017 AU
retrograde	-1902 Nov	07 j 15:20	16° © 28'56	
opposition	-1901 Jan	19 j 20:23	14° © 26'31	0°38'55
min. Earth dist.	-1901 Jan	20 j 20:12	14° © 23'55	17.26415 AU
direct	-1901 Apr	06 j 03:02	12° © 19'49	
conjunction	-1901 Jul	27 j 21:27	16° © 53'20	0°36'07
minimum elong	-1901 Jul	27 j 21:27	16° © 53'20	0°36'09
max. Earth dist.	-1901 Jul	26 j 17:57	16° 5 49'00	19.25857 AU
retrograde	-1901 Nov	12 j 15:11	21° © 17'36	
opposition	-1900 Jan	24 j 21:59	19° © 15'18	0°41'32
min. Earth dist.	-1900 Jan	25 j 22:22	19° © 12'38	17.25526 AU
direct	-1900 Apr	10 j 06:10	17° © 08'37	
max. Earth dist.	-1900 Jul	30 j 21:55	21° © 37'59	19.25234 AU
		-		
conjunction	-1900 Aug	01 j 01:44	21° 5 42'23	0°38'19
minimum elong	-1900 Aug	01 j 01:44	21° 5 42'23	0°38'22
_	-		_	

-1900 Nov 16 j 16:52 26°506'35

retrograde

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1900 in astronomical counting style is the year 1901 BCE in historical counting style. -1900 Jan 24 j 21:59 19°515'18 0°41'32 conjunction -1893 Sep 04 j 18:21 25° Ω 15'37 0°45'35 opposition -1900 Jan 25 j 22:22 19°512'38 17.25526 AU -1893 Sep 04 j 18:21 25° Ω 15'38 0°45'37 min. Earth dist. minimum elong -1900 Apr 10 j 06:10 17°508'37 -1893 Sep 04 j 01:20 25° € 12'56 19.35415 AU direct max. Earth dist. -1893 Dec 20 j 18:48 29°**Ω**36'57 -1900 Jul 30 j 21:55 21°537'59 19.25234 AU max. Earth dist. retrograde opposition -1900 Aug 01 j 01:44 21°5042'23 0°38'19 conjunction min. Earth dist. -1892 Mar 04 j 09:03 $27^{\circ}\Omega$ 33'39 17.37214 AU -1892 May 19 j 21:17 $25^{\circ}\Omega$ 29'15 minimum elong -1900 Aug 01 j 01:44 21°5642'23 0°38'22 direct -1900 Nov 16 j 16:52 26°506'35 retrograde opposition -1899 Jan 28 j 23:51 24°504'23 0°43'51 conjunction -1892 Sep 08 j 17:45 29° Ω 59'16 0°45'23 min. Earth dist. -1899 Jan 29 j 22:56 24°501'52 17.25163 AU minimum elong -1892 Sep 08 j 17:45 29° Ω 59'16 0°45'24 direct -1899 Apr 15 j 12:20 21°557'42 max. Earth dist. -1892 Sep 08 j 02:28 29° Ω 56'51 19.39116 AU -1899 Aug 05 j 03:58 26°\$27'29 -1892 Sep 08 j 22:25 max. Earth dist. 19.25120 AU 0° M -1892 Dec 24 j 16:11 retrograde 4° m 19'58 conjunction -1899 Aug 06 j 05:55 26°531'35 0°40'16 opposition -1891 Mar 08 j 21:02 2°m/18'19 0°50'21 minimum elong -1899 Aug 06 j 05:55 26°531'35 0°40'17 min. Earth dist. -1891 Mar 09 j 10:03 2° m 16'56 17.41222 AU -1899 Oct 07 j 21:19 $0^{\circ}\Omega$ direct -1891 May 24 j 23:54 0° m 12'38 retrograde -1899 Nov 21 j 17:12 0°**£**55'36 -1898 Jan 07 j 03:44 30°Rூ conjunction -1891 Sep 13 j 16:25 4° Mp 41'36 0°44'53 opposition -1898 Feb 03 j 02:20 28°\$53'31 0°45'52 minimum elong -1891 Sep 13 j 16:25 4° m 41'36 0°44'54 min. Earth dist. -1898 Feb 04 j 01:27 28°551'00 17.25302 AU max. Earth dist. -1891 Sep 13 j 03:46 4° m/39'36 19.43427 AU 9°**m**01'36 direct -1898 Apr 20 j 16:30 26°5946'52 retrograde -1891 Dec 29 j 15:26 -1898 Jul 20 j 21:07 $0^{\circ}\Omega$ opposition -1890 Mar 13 j 23:09 7° m 00'07 0°49'37 max. Earth dist. -1898 Aug 10 j 07:18 1°Ω16'31 19.25517 AU min. Earth dist. -1890 Mar 14 i 09:15 6° m 59'03 17.45804 AU direct -1890 May 30 j 04:51 4° m 54'47 conjunction -1898 Aug 11 i 09:22 1°Ω20'39 0°41'55 -1898 Aug 11 j 09:22 1°Ω20'39 0°41'57 -1890 Sep 18 j 14:07 9° m 22'35 0°44'05 minimum elong conjunction -1898 Nov 26 j 18:33 5°Ω44'26 minimum elong -1890 Sep 18 j 14:07 9° m 22'35 0°44'07 retrograde -1897 Feb 08 j 04:53 3°Ω42'24 0°47'33 -1890 Sep 18 j 03:45 9° m 20'57 19.48285 AU opposition max. Earth dist. -1897 Feb 09 j 02:38 3°**Ω**40'02 17.25952 AU -1889 Jan 03 j 11:44 13° Mp 41'54 min. Earth dist. retrograde -1889 Mar 19 j 01:04 11° mp 40'35 0°48'34 -1897 Apr 25 j 21:46 1°**Ω**35'47 direct opposition -1889 Mar 19 j 09:56 11° Mp 39'39 17.50915 AU min. Earth dist. -1897 Aug 16 j 12:39 6°Ω09'20 0°43'17 -1889 Jun 04 j 06:13 9° Mp 35'38 conjunction direct -1897 Aug 16 j 12:39 6°**Ω**09'20 0°43'18 minimum elong -1889 Sep 23 j 11:03 14° m 02'12 0°43'01 -1897 Aug 15 j 12:49 6°**Ω**05'33 19.26418 AU max. Earth dist. conjunction -1897 Dec 01 j 19:13 $10^{\circ}\Omega$ 32'45 -1889 Sep 23 j 11:03 14° m 02'12 0°43'00 retrograde minimum elong -1896 Feb 13 j 07:33 8° **Ω**30'48 0°48'54 -1889 Sep 23 j 02:50 14° m 00'54 19.53638 AU opposition max. Earth dist. 8°**Ω**28'30 17.27099 AU -1888 Jan 08 j 10:01 18° m 20'46 min. Earth dist. -1896 Feb 14 j 04:43 retrograde direct -1896 Apr 30 j 02:30 6°**Ω**24'15 opposition -1888 Mar 23 j 02:27 16° mp 19'39 0°47'12 min. Earth dist. -1888 Mar 23 j 08:18 16° **m** 19'02 17.56466 AU conjunction -1896 Aug 20 j 15:11 10° **Ω**57'23 0°44'20 direct -1888 Jun 08 j 10:01 14° Mp 15'08 -1896 Aug 20 j 15:11 10°**Ω**57'23 0°44'21 minimum elong max. Earth dist. -1896 Aug 19 j 15:38 10° **Ω**53'39 19.27833 AU -1888 Sep 27 j 07:12 18° Mp 40'22 0°41'39 conjunction -1896 Nov 08 j 22:25 15°**Ω** -1888 Sep 27 j 07:12 18° Mp 40'22 0°41'40 minimum elong -1896 Dec 05 j 19:35 $15^{\circ}\Omega 20'24$ -1888 Sep 27 j 01:34 18° Mg 39'29 19.59388 AU retrograde max. Earth dist. -1895 Jan 02 j 04:53 15°R**Ω** -1887 Jan 12 j 05:21 22° m 58'10 retrograde -1895 Feb 17 j 10:24 13° Ω 18'28 0°49'53 -1887 Mar 28 i 03:47 20° m 57'15 0°45'31 opposition opposition -1887 Mar 28 j 08:34 20° m 56'45 17.62396 AU min. Earth dist. -1895 Feb 18 i 06:11 13° Ω 16'20 17.28784 AU min. Earth dist. direct -1895 May 05 i 06:50 $11^{\circ}\Omega$ 12'00 direct -1887 Jun 13 j 10:19 18° m 53'10 -1895 Aug 13 j 22:45 $15^{\circ}\Omega$ -1887 Oct 02 j 02:17 23° mp 16'58 0°40'02 conjunction -1895 Aug 25 j 17:00 $15^{\circ}\Omega$ 44'34 $0^{\circ}45'04$ -1887 Oct 02 j 02:17 23° mp 16'58 0°40'02 conjunction minimum elong -1895 Aug 25 j 17:00 $15^{\circ}\Omega$ 44'34 $0^{\circ}45'06$ -1887 Oct 01 j 22:22 23° Mp 16'22 19.65481 AU minimum elong max. Earth dist. max. Earth dist. -1895 Aug 24 j 20:10 15° **Ω**41'16 19.29790 AU -1886 Jan 17 j 02:44 27° m 33'59 retrograde retrograde -1895 Dec 10 j 20:05 $20^{\circ}\Omega$ 07'05 opposition -1886 Apr 02 j 04:28 25° m 33'15 0°43'34 opposition -1894 Feb 22 j 13:17 $18^{\circ}\Omega$ 05'12 0° 50'32 min. Earth dist. -1886 Apr 02 j 06:12 25° Mp 33'04 17.68617 AU -1894 Feb 23 j 07:33 18° Ω 03'14 17.31006 AU min. Earth dist. direct -1886 Jun 18 j 12:03 23° Mp 29'35 direct -1894 May 10 j 12:20 15°**Ω**58'52 -1886 Oct 06 j 20:44 27° m 51'55 0°38'10 conjunction -1894 Aug 30 j 18:01 20° **Ω**30'42 0°45'29 -1886 Oct 06 j 20:44 27° m 51'55 conjunction minimum elong 0°38'10 -1894 Aug 30 j 18:01 20° Ω30'42 0°45'30 -1886 Oct 06 j 19:32 27° m 51'44 19.71818 AU minimum elong max. Earth dist. -1894 Aug 29 j 22:13 20° **Ω**27'34 19.32304 AU -1886 Nov 11 j 14:40 max. Earth dist. 0∘**⊽** retrograde -1894 Dec 15 j 18:46 $24^{\circ}\Omega 52'39$ retrograde -1885 Jan 21 j 21:07 2°**2**08'05 opposition -1893 Feb 27 j 15:56 $22^{\circ}\Omega$ 50'49 0° 50'49 opposition -1885 Apr 07 j 04:38 0°**£**07'31 0°41'20 min. Earth dist. -1893 Feb 28 j 08:46 22° **Ω**49'01 17.33819 AU min. Earth dist. -1885 Apr 07 j 05:32 0°**2**07'26 17.75058 AU direct -1893 May 15 j 15:46 20°Ω44'38 -1885 Apr 10 j 04:47 30°R M

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	nical year style is used: The	-	in astronomical co				
direct	-1885 Jun 23 j 10:51			min. Earth dist.	-1877 May 13 j 13:50		18.29980 AU
	-1885 Aug 31 j 08:32	0∘ ಹ		direct	-1877 Jul 30 j 06:44	3°M28'14	
· · · · · · · · · · · ·	1005 0-4 11 : 14.12	20 0 25105	0927105	:	1977 N 15 : 00-21	70 m 25152	0012126
conjunction	-1885 Oct 11 j 14:13	2° £ 25'05		conjunction	-1877 Nov 15 j 00:31	7°M35'52	
minimum elong	-1885 Oct 11 j 14:13	2° £ 25'05	0°36'05	minimum elong	-1877 Nov 15 j 00:31	7°M35'52	0°13'24
max. Earth dist.	-1885 Oct 11 j 14:10		19.78349 AU	behind sun begin	-1877 Nov 14 j 20:40	7°M35'18	
retrograde	-1884 Jan 26 j 17:36	6° £ 40'22	0020150	behind sun end	-1877 Nov 15 j 04:22	7°M36'26	20.22551 177
opposition	-1884 Apr 11 j 04:14	4° £ 39'57		max. Earth dist.	-1877 Nov 15 j 16:24		20.33551 AU
min. Earth dist.	-1884 Apr 11 j 02:12		17.81652 AU	retrograde	-1876 Mar 01 j 23:28	11° M .44'01	
direct	-1884 Jun 27 j 10:39	2° ≏ 37'08		opposition	-1876 May 17 j 22:37	9° ™ 44'17	0°13'03
		_		min. Earth dist.	-1876 May 17 j 05:22		18.37098 AU
conjunction	-1884 Oct 15 j 06:47	6° £ 56'20	0°33'46	direct	-1876 Aug 02 j 22:30	7°M44'34	
minimum elong	-1884 Oct 15 j 06:47	6° ≏ 56'20	0°33'45				
max. Earth dist.	-1884 Oct 15 j 09:35		19.84997 AU	conjunction	-1876 Nov 18 j 10:06		0°10'11
retrograde	-1883 Jan 30 j 10:43	11° £ 10'44		minimum elong	-1876 Nov 18 j 10:06		0°10'10
opposition	-1883 Apr 16 j 03:25	9° ₽ 10'26	0°36'11	behind sun begin	-1876 Nov 18 j 04:49	11°M49'55	
min. Earth dist.	-1883 Apr 16 j 00:23	9° ≙ 10'45	17.88346 AU	behind sun end	-1876 Nov 18 j 15:22	11°M51'27	
direct	-1883 Jul 02 j 08:29	7° ≏ 08'02		max. Earth dist.	-1876 Nov 19 j 04:55	11°M53'30	20.40643 AU
					-1875 Jan 17 j 05:06	15° M ₊	
conjunction	-1883 Oct 19 j 22:23	11° ≏ 25'34	0°31'16	retrograde	-1875 Mar 06 j 12:01	15°M58'04	
minimum elong	-1883 Oct 19 j 22:23	11° ≏ 25'34	0°31'16		-1875 Apr 26 j 00:20	15°RM	
max. Earth dist.	-1883 Oct 20 j 02:09	11° ≙ 26′09	19.91738 AU	opposition	-1875 May 22 j 15:29	13°M58'29	0°09'24
retrograde	-1882 Feb 04 j 06:04	15° ≏ 39'03		min. Earth dist.	-1875 May 21 j 20:40	14°ML00'23	18.44145 AU
opposition	-1882 Apr 21 j 01:34	13° ≏ 38'50	0°33'17	direct	-1875 Aug 07 j 14:02	11° M 59'11	
min. Earth dist.	-1882 Apr 20 j 19:46	13° ≏ 39'26	17.95121 AU		-1875 Nov 04 j 19:25	15°M₁	
direct	-1882 Jul 07 j 06:39				•		
	J			conjunction	-1875 Nov 22 j 18:59	16°ML03'50	0°06'54
conjunction	-1882 Oct 24 j 13:06	15° ≏ 52'40	0°28'36	minimum elong	-1875 Nov 22 j 18:59		0°06'52
minimum elong	-1882 Oct 24 j 13:06			behind sun begin	-1875 Nov 22 j 12:54		
max. Earth dist.	-1882 Oct 24 j 19:49			behind sun end	-1875 Nov 23 j 01:05		
retrograde	-1881 Feb 08 j 21:33	20° £ 05'13		max. Earth dist.	-1875 Nov 23 j 14:22		20 47636 AU
opposition	-1881 Apr 25 j 23:07	18° Ω 05'04	0°30'13	retrograde	-1874 Mar 11 j 00:33		20.17030110
min. Earth dist.	-1881 Apr 25 j 16:12			min. Earth dist.	-1874 May 26 j 11:16		18 51076 AU
direct	-1881 Jul 12 j 03:19			opposition	-1874 May 27 j 07:27		0°05'43
ancet	1001 341 12 1 03.17	10 -0321		direct	-1874 Aug 12 j 03:28		0 03 13
conjunction	-1881 Oct 29 j 02:39	20° Ω 17'34	0°25'46	uncet	10/1/14g 12 j 05.20	10 11012 10	
minimum elong	-1881 Oct 29 j 02:39			conjunction	-1874 Nov 27 j 03:30	20°M.15'26	0°03'35
max. Earth dist.	-1881 Oct 29 j 10:22			minimum elong	-1874 Nov 27 j 03:29		0°03'33
retrograde	-1880 Feb 13 j 14:57		20.03400 AO	behind sun begin	-1874 Nov 26 j 21:00		0 03 33
opposition	-1880 Apr 29 j 19:45		0°26'59	behind sun end	-1874 Nov 27 j 09:57		
min. Earth dist.	-1880 Apr 29 j 10:10			max. Earth dist.	-1874 Nov 28 j 01:17		20 54464 ATT
			10.00043 AU				20.34404 AU
direct	-1880 Jul 16 j 00:06	20 == 27 43		retrograde	-1873 Mar 15 j 12:38 -1873 May 31 j 22:47		0°02'02
aaniumatian	1000 Nov. 01 : 15.27	249 0 40115	0022150	opposition min. Earth dist.	, ,		
conjunction	-1880 Nov 01 j 15:27 -1880 Nov 01 j 15:27				-1873 May 31 j 01:16		18.37787 AU
minimum elong	3			direct	-1873 Aug 16 j 17:33	20 11623 38	
max. Earth dist.	-1880 Nov 02 j 02:22		20.12332 AU	. ,.	1072 D 01 : 11 10	2.40M 2.5122	0000112
retrograde	-1879 Feb 17 j 04:56 -1879 May 04 j 15:45		0022120	conjunction	-1873 Dec 01 j 11:10 -1873 Dec 01 j 11:10		0°00'12 0°00'10
opposition				minimum elong			0-00-10
min. Earth dist.	-1879 May 04 j 04:38		18.13810 AU	behind sun begin	-1873 Dec 01 j 04:43		
direct	-1879 Jul 20 j 19:12	24° 22 49′58		behind sun end	-1873 Dec 01 j 17:37		20 (1041 47)
	107031 06:02.00	200 0 00147	0010147	max. Earth dist.	-1873 Dec 02 j 09:10		20.61041 AU
conjunction	-1879 Nov 06 j 03:09	29° £ 00'47	0°19'47	desc. node	-1873 Dec 22 j 07:38		
minimum elong	-1879 Nov 06 j 03:09	29° ⊆ 00'47		retrograde	-1872 Mar 18 j 23:50		
max. Earth dist.	-1879 Nov 06 j 15:07		20.19351 AU	opposition	-1872 Jun 04 j 13:32		0°-1'-38
	-1879 Nov 22 j 12:19	0° M		min. Earth dist.	-1872 Jun 03 j 15:11		18.64230 AU
retrograde	-1878 Feb 21 j 20:35	3° M ₁0'36		direct	-1872 Aug 20 j 05:20	24°IIL33'35	
opposition	-1878 May 09 j 10:50	1°ML10'38					
min. Earth dist.	-1878 May 08 j 21:14		18.22879 AU	conjunction	-1872 Dec 04 j 18:40		0°-3'-11
	-1878 Jun 09 j 06:34	30° ₹ Ω		minimum elong	-1872 Dec 04 j 18:40		0°03'14
direct	-1878 Jul 25 j 13:33	29° ≏ 10'04		behind sun begin	-1872 Dec 04 j 12:10		
	-1878 Sep 08 j 00:42	0° M ₊		behind sun end	-1872 Dec 05 j 01:10		
				max. Earth dist.	-1872 Dec 05 j 18:40	28°M37'46	20.67312 AU
conjunction	-1878 Nov 10 j 14:18	3° M 19′17	0°16'38		-1872 Dec 29 j 11:19	0°⊀	
minimum elong	-1878 Nov 10 j 14:18	3° M 19′17	0°16'37	retrograde	-1871 Mar 23 j 11:00	2° ∡ ³38'55	
max. Earth dist.	-1878 Nov 11 j 05:21	3°M21'33	20.26436 AU	min. Earth dist.	-1871 Jun 08 j 03:57	0° ∡ ¹42'12	18.70318 AU
retrograde	-1877 Feb 26 j 09:22	7°M28'14		opposition	-1871 Jun 09 j 03:27	0° ₹ ³39'50	0°-5'-17
opposition	-1877 May 14 j 05:00	5°M28'23	0°16'39		-1871 Jun 26 j 01:20	30°RML	

•	omena of Uranus II		•	· · ·			age 3
direct	iical year style is used: T	-	in astronomical cou	direct			
direct	-1871 Aug 24 j 17:51 -1871 Oct 19 j 23:53	28°11642′05 0° √ 1		direct	-1864 Sep 22 j 06:35 -1864 Dec 20 j 05:47	2/3×103/14 0°る	
	-18/1 Oct 19 J 23.33	0 X			-1804 Dec 20 J 03.47	0.0	
conjunction	-1871 Dec 09 j 01:32	2° х 41'30	0°-6'-27	conjunction	-1863 Jan 05 j 15:06	0° 궁 56'09	0°-27'-4
minimum elong	-1871 Dec 09 j 01:32	2° × ⁷ 41'30	0°06'29	minimum elong	-1863 Jan 05 j 15:06	0° ろ 56'09	
behind sun begin	-1871 Dec 08 j 19:22	2° ∡ ¹40'37		max. Earth dist.	-1863 Jan 06 j 19:40		21.02993 AU
behind sun end	-1871 Dec 09 j 07:41	2° ∡ ¹42'23		retrograde	-1863 Apr 25 j 11:08	4° ප 57'18	
max. Earth dist.	-1871 Dec 10 j 01:17	2° ∡ ¹45'00	20.73201 AU	opposition	-1863 Jul 12 j 18:06	2° ප් 58'15	0°-31'-19
retrograde	-1870 Mar 27 j 21:15	6° ∡ ¹45'37		min. Earth dist.	-1863 Jul 11 j 14:50	3° ⋜ 00'59	19.04478 AU
opposition	-1870 Jun 13 j 16:45	4° ∡ ¹46'36	0°-8'-53	direct	-1863 Sep 26 j 14:18	1° る 02'00	
min. Earth dist.	-1870 Jun 12 j 17:00	4° ∡ ¹48'59	18.76010 AU				
direct	-1870 Aug 29 j 04:13	2° ₹¹ 49'08		conjunction	-1862 Jan 09 j 19:31	4° る 54'22	0°-29'-33
				minimum elong	-1862 Jan 09 j 19:31	4° る 54'22	0°29'37
conjunction	-1870 Dec 13 j 08:08	6° ∡ ¹47'24	0°-9'-39	max. Earth dist.	-1862 Jan 10 j 23:21	4° る 58'21	21.05786 AU
minimum elong	-1870 Dec 13 j 08:07	6° ∡ 747'24	0°09'43	retrograde	-1862 Apr 29 j 18:51	8° る 55'21	
behind sun begin	-1870 Dec 13 j 02:43	6° ∡ ¹46'38		min. Earth dist.	-1862 Jul 16 j 00:00		19.07087 AU
behind sun end	-1870 Dec 13 j 13:32	6° ∡ ¹48'10		opposition	-1862 Jul 17 j 02:26	6° る 56'19	0°-33'-59
max. Earth dist.	-1870 Dec 14 j 09:26		20.78666 AU	direct	-1862 Sep 30 j 18:34	5° පි 00'11	
retrograde	-1869 Apr 01 j 07:07	10° ∡ 50'56					
min. Earth dist.	-1869 Jun 17 j 04:22		18.81247 AU	conjunction	-1861 Jan 14 j 00:02	8° ろ 52'06	
opposition	-1869 Jun 18 j 05:09	8° ∡ '51'58	0°-12'-25	minimum elong	-1861 Jan 14 j 00:02	8° 궁 52'06	
direct	-1869 Sep 02 j 15:04	6° ∡ 154'45		max. Earth dist.	-1861 Jan 15 j 04:49		21.08190 AU
	10(0 D 17:14.00	100 751154	00 121 40	retrograde	-1861 May 04 j 03:18	12°る52'57	10 00275 ATT
conjunction	-1869 Dec 17 j 14:06			min. Earth dist.	-1861 Jul 20 j 07:07		
minimum elong behind sun begin	-1869 Dec 17 j 14:06 -1869 Dec 17 j 09:57		0-12-51	opposition	-1861 Jul 21 j 10:14 -1861 Oct 05 j 01:36	8° る 57'57	0*-36-29
behind sun begin	-1869 Dec 17 j 19:14			direct	-1801 Oct 03 J 01.30	8 O 3/3/	
max. Earth dist.	-1869 Dec 17 j 18:14 -1869 Dec 18 j 15:01		20.83686 AU	conjunction	-1860 Jan 18 j 04:32	120₹/10/30	0°-34'-5
retrograde	-1868 Apr 04 j 16:24	14° × 54'55	20.03000 AC	minimum elong	-1860 Jan 18 j 04:32		
opposition	-1868 Jun 21 j 17:06		0°-15'-52	max. Earth dist.	-1860 Jan 19 j 08:15		
min. Earth dist.	-1868 Jun 20 j 16:20			retrograde	-1860 May 07 j 11:22		21.10100110
direct	-1868 Sep 06 j 00:02			opposition	-1860 Jul 24 j 17:54		0°-38'-48
				min. Earth dist.	-1860 Jul 23 j 16:03		
conjunction	-1868 Dec 20 j 19:42	14° ₹ ′55'03	0°-15'-52	direct	-1860 Oct 08 j 05:30	12° る 55'25	
minimum elong	-1868 Dec 20 j 19:42	14° ₹ ′55'03	0°15'56		•		
behind sun begin	-1868 Dec 20 j 18:25	14° ∡ ¹54'52		conjunction	-1859 Jan 21 j 09:20	16° පි 46'42	0°-36'-6
behind sun end	-1868 Dec 20 j 21:00	14° ₹ ′55'14		minimum elong	-1859 Jan 21 j 09:19	16° පි 46'42	0°36'10
max. Earth dist.	-1868 Dec 21 j 22:14	14° ∡ °58'55	20.88289 AU	max. Earth dist.	-1859 Jan 22 j 13:33	16° ප 50'44	21.11663 AU
retrograde	-1867 Apr 09 j 01:30	18° ∡ ′57'34		retrograde	-1859 May 11 j 19:39		
min. Earth dist.	-1867 Jun 25 j 02:18			min. Earth dist.	-1859 Jul 27 j 23:00		
opposition	-1867 Jun 26 j 04:10		0°-19'-12	opposition	-1859 Jul 29 j 01:07		0°-40'-57
direct	-1867 Sep 10 j 09:40	15° ∡ *01'44		direct	-1859 Oct 12 j 11:45	16° ප් 52'42	
conjunction	-1867 Dec 25 j 00:54			conjunction	-1858 Jan 25 j 14:17		
minimum elong	-1867 Dec 25 j 00:54	18° 🗷 56'54		minimum elong	-1858 Jan 25 j 14:16		
max. Earth dist.	-1867 Dec 26 j 03:03		20.92490 AU	max. Earth dist.	-1858 Jan 26 j 16:52		21.12627 AU
retrograde opposition	-1866 Apr 13 j 09:47 -1866 Jun 30 j 14:30		0° 22! 26	retrograde min. Earth dist.	-1858 May 16 j 03:33 -1858 Aug 01 j 07:45		10 12040 AII
min. Earth dist.	-1866 Jun 29 j 12:54			opposition	-1858 Aug 01 j 07.45 -1858 Aug 02 j 08:06		
direct	-1866 Sep 14 j 16:40		10.74470 AO	direct	-1858 Oct 16 j 15:34		0 -42 -33
direct	1000 Бер 14 ј 10.40	17 7 03 10		direct	1030 001 10 1 13.54	20 04732	
conjunction	-1866 Dec 29 j 05:56	22° х 57'36	0°-21'-42	conjunction	-1857 Jan 29 j 19:34	24°る40'55	0°-39'-38
minimum elong	-1866 Dec 29 j 05:56			minimum elong	-1857 Jan 29 j 19:34		
max. Earth dist.	-1866 Dec 30 j 09:34			max. Earth dist.	-1857 Jan 30 j 22:09		
retrograde	-1865 Apr 17 j 18:35	26° ₹ ′59′18		retrograde	-1857 May 20 j 11:57		
min. Earth dist.	-1865 Jul 03 j 21:27		18.98160 AU	opposition	-1857 Aug 06 j 14:52		0°-44'-38
opposition	-1865 Jul 05 j 00:12	25° ∡ ¹00'16	0°-25'-32	min. Earth dist.	-1857 Aug 05 j 14:30	26° ප් 45'15	19.13040 AU
direct	-1865 Sep 19 j 01:18	23° х ¹03'43		direct	-1857 Oct 20 j 21:11	24° පි 46'58	
conjunction	-1864 Jan 02 j 10:25			conjunction	-1856 Feb 03 j 00:50		0°-41'-7
·	-		0924121	minimum elong	-1856 Feb 03 j 00:50	28°₹38'00	0°41'09
minimum elong	-1864 Jan 02 j 10:25			_	-		
·	-1864 Jan 03 j 13:41	27° ∡ ′01′12		max. Earth dist.	-1856 Feb 04 j 01:32	28° ප් 41'31	
minimum elong max. Earth dist.	-1864 Jan 03 j 13:41 -1864 Mar 02 j 06:17	27° メ 01'12 0° る		max. Earth dist.	-1856 Feb 04 j 01:32 -1856 Feb 27 j 12:09	28° ප් 41'31 0°≋	
minimum elong	-1864 Jan 03 j 13:41 -1864 Mar 02 j 06:17 -1864 Apr 21 j 02:20	27° ҂ 01'12 0° ප් 0° ප් 58'41		max. Earth dist.	-1856 Feb 04 j 01:32 -1856 Feb 27 j 12:09 -1856 May 23 j 19:16	28°♂41'31 0°≈ 2°≈39'07	21.12813 AU
minimum elong max. Earth dist. retrograde	-1864 Jan 03 j 13:41 -1864 Mar 02 j 06:17 -1864 Apr 21 j 02:20 -1864 Jun 11 j 22:19	27° 🗷 01'12 0° පි 0° පි58'41 30° R 🗷	20.99831 AU	max. Earth dist.	-1856 Feb 04 j 01:32 -1856 Feb 27 j 12:09 -1856 May 23 j 19:16 -1856 Aug 09 j 21:37	28° ප් 41'31 0°≈ 2°≈39'07 0°≈39'57	21.12813 AU 0°-46'-9
minimum elong max. Earth dist.	-1864 Jan 03 j 13:41 -1864 Mar 02 j 06:17 -1864 Apr 21 j 02:20	27° 🗷 01'12 0° ጜ 0° ጜ58'41 30° ዪ Ґ 29° Ґ 02'16	20.99831 AU 19.01498 AU	max. Earth dist.	-1856 Feb 04 j 01:32 -1856 Feb 27 j 12:09 -1856 May 23 j 19:16	28° 云 41'31 0°≈ 2°≈39'07 0°≈39'57 0°≈42'12	21.12813 AU

A 44 4	. 1 4 1 . 1 701	1056		41 4 1 1 41	1057 DCE: 1:4 : 1	41	
	ical year style is used: Th		in astronomical cou	nting style is the year max. Earth dist.			
direct	-1856 Oct 24 j 01:12 -1856 Dec 18 j 17:04				-1848 Mar 06 j 23:45 -1848 Jun 25 j 15:04	4° X 27'06	20.93676 AU
	-1856 Dec 18 J 17:04	0° ≈		retrograde	-1848 Sep 10 j 22:14	2° H 28'52	00 501 2
conjunction	-1855 Feb 06 j 06:39	2°≈35'09	0°-42'-24	opposition min. Earth dist.	-1848 Sep 10 j 22.14 -1848 Sep 10 j 09:16		18.91715 AU
minimum elong	-1855 Feb 06 j 06:38	2°≈35'09	0°42'27	direct	-1848 Nov 24 j 14:15	0° H 31'36	10.71713 AC
max. Earth dist.	-1855 Feb 07 j 07:09		21.12017 AU	direct	-1040 NOV 24 j 14.13	0 7(3130	
retrograde	-1855 May 28 j 04:10	6°≈36'26	21.12017 AC	conjunction	-1847 Mar 10 j 17:52	4°) €26'46	0°-45'-1
min. Earth dist.	-1855 Aug 13 j 05:38		19.11443 AU	minimum elong	-1847 Mar 10 j 17:52	4°)(26'46	0°45'02
opposition	-1855 Aug 14 j 03:47	4°≈37'08	0°-47'-27	max. Earth dist.	-1847 Mar 11 j 08:24		20.89625 AU
direct	-1855 Oct 28 j 06:38	2°≈41'06	· · · · - ·	retrograde	-1847 Jun 30 j 01:49	8°) (31'33	20.09020110
ancer	1033 001 20 1 00:30	2 / 4 / 11 00		opposition	-1847 Sep 15 i 04:33	6° ∺ 31'17	0°-49'-26
conjunction	-1854 Feb 10 j 12:32	6° ≈ 32'23	0°-43'-28	min. Earth dist.	-1847 Sep 14 j 16:11		18.87476 AU
minimum elong	-1854 Feb 10 j 12:32	6°≈32'23	0°43'30	direct	-1847 Nov 28 j 20:40	4°) (32'31'49	10.07 170 710
max. Earth dist.	-1854 Feb 11 j 11:04		21.10658 AU	ancer	1017 1107 20 1 20:10	1 7(33 1)	
retrograde	-1854 Jun 01 j 10:53	10°≈33'54	21.10030710	conjunction	-1846 Mar 15 j 04:01	8° ¥ 29'56	0°-44'-21
opposition	-1854 Aug 18 j 10:02		0°-48'-32	minimum elong	-1846 Mar 15 j 04:01	8° ¥ 29'56	0°44'23
min. Earth dist.	-1854 Aug 17 j 13:59		19.09829 AU	max. Earth dist.	-1846 Mar 15 j 16:02		20.85204 AU
direct	-1854 Nov 01 j 10:15	6°≈38'16	17.07027 110	retrograde	-1846 Jul 04 j 11:37	12°) 35'24	20.03204710
direct	-1034 NOV 01 j 10.13	0 ~30 10		opposition	-1846 Sep 19 j 11:30	10°) (35'04	0°-48'-35
conjunction	-1853 Feb 14 j 18:42	10° ≈ 29'47	0°-44'-20	min. Earth dist.	-1846 Sep 19 j 01:50		18.82865 AU
minimum elong	-1853 Feb 14 j 18:42	10 ≈2947 10°≈29'47	0°44'24	direct	-1846 Dec 03 j 01:39	8° H 37'22	18.82803 AU
max. Earth dist.	-1853 Feb 15 j 17:07		21.08806 AU	direct	-1040 DCC 05 J 01.59	6 X 3722	
	•		21.08800 AU	agniumation	1945 Mar 10: 14:56	120¥24121	0°-43'-28
retrograde	-1853 Jun 05 j 20:18	14°≈31'35	0°-49'-22	conjunction	-1845 Mar 19 j 14:56		0°-43'-28 0°43'29
opposition	-1853 Aug 22 j 16:00 -1853 Aug 21 j 20:01	12°≈31'59		minimum elong	-1845 Mar 19 j 14:56		
min. Earth dist.			19.07745 AU	max. Earth dist.	-1845 Mar 20 j 01:41		20.80403 AU
direct	-1853 Nov 05 j 15:55	10° ≈ 35'38		retrograde	-1845 Jul 08 j 23:22		00 471 20
	1052 F. 1. 10:01 12	1.400712.0	00 441 50	opposition	-1845 Sep 23 j 18:40		0°-47'-29
conjunction	-1852 Feb 19 j 01:12		0°-44'-59	min. Earth dist.	-1845 Sep 23 j 09:50		18.77851 AU
minimum elong	-1852 Feb 19 j 01:12		0°45'02	direct	-1845 Dec 07 j 09:03	12° 大 42'19	
max. Earth dist.	-1852 Feb 19 j 21:42		21.06510 AU		104434 22:02.47	1.60\(/.4012.4	00 404 04
	-1852 Feb 28 j 14:19	15° ≈		conjunction	-1844 Mar 23 j 02:47		0°-42'-21
retrograde	-1852 Jun 09 j 03:04	18°≈29'40	00 401 50	minimum elong	-1844 Mar 23 j 02:47		0°42'22
opposition	-1852 Aug 25 j 21:59	16°≈29'54	0°-49'-59	max. Earth dist.	-1844 Mar 23 j 10:43		20.75176 AU
min. Earth dist.	-1852 Aug 25 j 04:07		19.05254 AU	retrograde	-1844 Jul 12 j 10:04		
	,	15°R≈		opposition	-1844 Sep 27 j 02:19		0°-46'-8
direct							
	-1852 Nov 08 j 18:55	14°≈33'22		min. Earth dist.	-1844 Sep 26 j 20:29		18.72411 AU
	-1852 Nov 08 j 18:55 -1852 Dec 11 j 01:02			min. Earth dist. direct	-1844 Sep 26 j 20:29 -1844 Dec 10 j 15:07		18.72411 AU
	-1852 Dec 11 j 01:02	15° ≈		direct	-1844 Dec 10 j 15:07	16°) 48'40	
conjunction	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19	15°≈ 18°≈25'42		direct conjunction	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36	16°) 48'40 20°) 48'04	0°-41'-1
minimum elong	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19	15°≈ 18°≈25'42 18°≈25'42	0°45'29	direct conjunction minimum elong	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36	16°¥48'40 20°¥48'04 20°¥48'04	0°-41'-1 0°41'02
minimum elong max. Earth dist.	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34		direct conjunction minimum elong max. Earth dist.	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44	16°\dagger48'40 20°\dagger48'04 20°\dagger48'57	0°-41'-1 0°41'02
minimum elong max. Earth dist. retrograde	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15	0°45'29 21.03832 AU	conjunction minimum elong max. Earth dist. retrograde	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09	16°\;\;\48'40 20°\;\48'04 20°\;\48'04 20°\;\48'57 24°\;\55'45	0°-41'-1 0°41'02 20.69533 AU
minimum elong max. Earth dist. retrograde min. Earth dist.	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06	15°≈ 18°≈25'42 18°≈25'42 18°≈25'44 22°≈28'15 20°≈30'11	0°45'29 21.03832 AU 19.02382 AU	conjunction minimum elong max. Earth dist. retrograde opposition	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16	16°\;\;\48'40 20°\;\;\48'04 20°\;\48'04 20°\;\48'57 24°\;\48'57 24°\;\55'45 22°\;\55'02	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33
minimum elong max. Earth dist. retrograde	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15	0°45'29 21.03832 AU 19.02382 AU	conjunction minimum elong max. Earth dist. retrograde	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28	16°¥48'40 20°¥48'04 20°¥48'57 24°¥55'45 22°¥55'02 22°¥55'32	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33
minimum elong max. Earth dist. retrograde min. Earth dist.	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06	15°≈ 18°≈25'42 18°≈25'42 18°≈25'44 22°≈28'15 20°≈30'11	0°45'29 21.03832 AU 19.02382 AU	conjunction minimum elong max. Earth dist. retrograde opposition	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16	16°¥48'40 20°¥48'04 20°¥48'57 24°¥55'45 22°¥55'02 22°¥55'32	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58	16°\()48'40 20°\()48'04 20°\()48'57 24°\()45'57 24°\()45'55'45 22°\()45'32 20°\()456'25	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33	0°45'29 21.03832 AU 19.02382 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59	16°\(\pm\)48'40 20°\(\pm\)48'04 20°\(\pm\)48'57 24°\(\pm\)55'45 22°\(\pm\)55'32 20°\(\pm\)56'25 24°\(\pm\)57'02	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00	16° € 48'40 20° € 48'04 20° € 48'57 24° € 55'45 22° € 55'02 22° € 55'32 20° € 56'25 24° € 57'02 24° € 57'02	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19	16°\(\pm\)48'40 20°\(\pm\)48'04 20°\(\pm\)48'57 24°\(\pm\)55'45 22°\(\pm\)55'02 22°\(\pm\)55'32 20°\(\pm\)56'25 24°\(\pm\)57'02 24°\(\pm\)57'02 24°\(\pm\)57'30	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26	16°\(\pm\)48'40 20°\(\pm\)48'04 20°\(\pm\)48'57 24°\(\pm\)55'45 22°\(\pm\)55'02 22°\(\pm\)55'32 20°\(\pm\)56'25 24°\(\pm\)57'02 24°\(\pm\)57'02 24°\(\pm\)57'30 29°\(\pm\)05'28	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU
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minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Jun 17 j 20:17	$15^{\circ} \approx$ $18^{\circ} \approx 25'42$ $18^{\circ} \approx 25'42$ $18^{\circ} \approx 28'34$ $22^{\circ} \approx 28'15$ $20^{\circ} \approx 30'11$ $20^{\circ} \approx 28'22$ $18^{\circ} \approx 31'39$ $22^{\circ} \approx 24'33$ $22^{\circ} \approx 24'33$ $22^{\circ} \approx 27'08$ $26^{\circ} \approx 27'35$ $24^{\circ} \approx 27'35$	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45 -1842 Oct 05 j 16:53	16°\(\pm\)48'40 20°\(\pm\)48'04 20°\(\pm\)48'57 24°\(\pm\)55'45 22°\(\pm\)55'02 22°\(\pm\)55'32 20°\(\pm\)56'25 24°\(\pm\)57'02 24°\(\pm\)57'02 24°\(\pm\)57'30 29°\(\pm\)05'28 27°\(\pm\)04'47	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Jun 17 j 20:17 -1850 Sep 03 j 09:48	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33 22°≈27'08 26°≈27'35 24°≈27'35 24°≈29'10	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU 0°-50'-29	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45	16°\(\pm\)48'40 20°\(\pm\)48'04 20°\(\pm\)48'57 24°\(\pm\)55'45 22°\(\pm\)55'02 22°\(\pm\)55'32 20°\(\pm\)56'25 24°\(\pm\)57'02 24°\(\pm\)57'02 24°\(\pm\)57'30 29°\(\pm\)05'28 27°\(\pm\)04'47	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42
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minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Jun 17 j 20:17 -1850 Sep 03 j 09:48 -1850 Sep 02 j 18:15	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33 22°≈27'08 26°≈27'35 24°≈27'35 24°≈29'10	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU 0°-50'-29 18.99159 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45 -1842 Oct 05 j 16:53 -1842 Dec 19 j 07:13 -1841 Apr 05 j 19:16	16° ₭48'40 20° ₭48'04 20° ₭48'57 24° ₭55'45 22° ₭55'02 22° ₭55'32 20° ₭56'25 24° ₭57'02 24° ₭57'02 24° ₭57'30 29° ₭05'28 27° ₭04'47 25° ₭05'34 29° ₭07'26	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Jun 17 j 20:17 -1850 Sep 03 j 09:48 -1850 Sep 02 j 18:15 -1850 Nov 17 j 04:05	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33 22°≈27'08 26°≈27'35 24°≈27'35 24°≈29'10 22°≈30'40	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU 0°-50'-29 18.99159 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45 -1842 Oct 05 j 16:53 -1842 Dec 19 j 07:13 -1841 Apr 05 j 19:16 -1841 Apr 05 j 19:16	16°\()48'40\) 20°\()\(\)48'04\) 20°\()\(\)48'57\) 24°\()\(\)48'55'45\) 22°\()\(\)55'02\) 22°\()\(\)55'32\) 20°\()\(\)56'25\) 24°\()\(\)57'02\) 24°\()\(\)57'02\) 24°\()\(\)57'30\) 29°\(\)40'35\) 27°\(\)40'47\) 25°\(\)40'34\) 29°\(\)407'26\) 29°\(\)407'26\) 29°\(\)407'26\)	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42 18.60308 AU 0°-37'-40 0°37'41
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minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist.	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Jun 17 j 20:17 -1850 Sep 03 j 09:48 -1850 Sep 02 j 18:15 -1850 Nov 17 j 04:05 -1849 Mar 02 j 23:51 -1849 Mar 03 j 17:26 -1849 May 19 j 05:58 -1849 Jun 22 j 06:25 -1849 Sep 07 j 15:50 -1849 Sep 07 j 15:50 -1849 Sep 07 j 00:29 -1849 Nov 21 j 10:26	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈24'33 22°≈27'08 26°≈27'35 24°≈27'35 24°≈29'10 22°≈30'40 26°≈24'14 26°≈24'14 26°≈26'44 0° ₩ 0° ₩ 27'47 30°R≈ 28°≈27'41 28°≈29'15 26°≈30'36	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU 0°-50'-29 18.99159 AU 0°-45'-40 0°45'41 20.97396 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist.	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45 -1842 Oct 05 j 16:53 -1842 Dec 19 j 07:13 -1841 Apr 05 j 19:16 -1841 Apr 10 j 00:25 -1841 Oct 10 j 00:35 -1841 Oct 10 j 02:34 -1841 Nov 11 j 14:35 -1841 Dec 23 j 17:06	16°\()48'40' 20°\()\(\)48'04' 20°\()\(\)48'04' 20°\()\(\)48'57' 24°\()\(\)55'45' 22°\()\(\)55'02' 22°\()\(\)55'02' 24°\()\(\)57'02' 24°\()\(\)57'02' 24°\()\(\)57'02' 24°\()\(\)57'02' 24°\()\(\)57'02' 24°\()\(\)57'32' 29°\()\(\)60'32' 29°\()\(\)60'34' 29°\()\(\)7'26' 29°\()\(\)7'26' 29°\()\(\)7'39' 0°\()' 3°\(\)16'40' 1°\(\)15'40' 30°\(\)8\(\)	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42 18.60308 AU 0°-37'-40 0°37'41 20.57083 AU
minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. direct	-1852 Dec 11 j 01:02 -1851 Feb 22 j 08:19 -1851 Feb 22 j 08:19 -1851 Feb 23 j 04:31 -1851 Jun 13 j 12:50 -1851 Aug 29 j 10:06 -1851 Aug 30 j 03:50 -1851 Nov 13 j 01:06 -1850 Feb 26 j 15:45 -1850 Feb 26 j 15:45 -1850 Feb 27 j 09:51 -1850 Sep 03 j 09:48 -1850 Sep 02 j 18:15 -1850 Nov 17 j 04:05 -1849 Mar 02 j 23:51 -1849 Mar 02 j 23:51 -1849 Mar 03 j 17:26 -1849 May 19 j 05:58 -1849 Jun 22 j 06:25 -1849 Jun 22 j 06:25 -1849 Sep 07 j 15:50 -1849 Sep 07 j 15:50 -1849 Nov 21 j 10:26 -1848 Feb 28 j 01:36	15°≈ 18°≈25'42 18°≈25'42 18°≈28'34 22°≈28'15 20°≈30'11 20°≈28'22 18°≈31'39 22°≈24'33 22°≈27'08 26°≈27'35 24°≈27'35 24°≈29'10 22°≈30'40 26°≈24'14 26°≈24'14 26°≈26'44 0° ₩ 0° ₩ 27'47 30°R≈ 28°≈27'41 28°≈29'15 26°≈30'36 0° ₩	0°45'29 21.03832 AU 19.02382 AU 0°-50'-21 0°-45'-39 0°45'42 21.00778 AU 0°-50'-29 18.99159 AU 0°-45'-40 0°45'41 20.97396 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-1844 Dec 10 j 15:07 -1843 Mar 27 j 15:36 -1843 Mar 27 j 15:36 -1843 Mar 27 j 21:44 -1843 Jul 16 j 23:09 -1843 Oct 01 j 10:16 -1843 Oct 01 j 05:28 -1843 Dec 14 j 23:58 -1842 Apr 01 j 04:59 -1842 Apr 01 j 05:00 -1842 Apr 01 j 08:19 -1842 Jul 21 j 10:26 -1842 Oct 05 j 18:45 -1842 Oct 05 j 16:53 -1842 Dec 19 j 07:13 -1841 Apr 05 j 19:16 -1841 Apr 05 j 19:16 -1841 Apr 05 j 20:46 -1841 Oct 10 j 03:27 -1841 Oct 10 j 03:27 -1841 Oct 10 j 02:34 -1841 Nov 11 j 14:35 -1840 Feb 03 j 00:25	16° \ 48'40 20° \ 48'04 20° \ 48'04 20° \ 48'57 24° \ 55'45 22° \ 55'02 22° \ 55'32 20° \ 56'25 24° \ 57'02 24° \ 57'02 24° \ 57'30 29° \ 405'28 27° \ 404'47 25° \ 407'26 29° \ 407'26	0°-41'-1 0°41'02 20.69533 AU 0°-44'-33 18.66550 AU 0°-39'-27 0°39'27 20.63472 AU 0°-42'-42 18.60308 AU 0°-37'-40 0°37'41 20.57083 AU 0°-40'-37 18.53769 AU

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1840 in astronomical counting style is the year 1841 BCE in historical counting style. 3°**Υ**19'10 20.50415 AU -1840 Apr 09 i 09:16 behind sun begin -1832 May 15 j 14:16 7°**と**58'32 max. Earth dist. -1840 Jul 29 i 13:09 7°**Y**29'21 behind sun end -1832 May 15 j 21:54 7°**8**59'39 retrograde -1840 Oct 13 j 12:48 5°Υ28'04 0°-38'-18 -1832 May 15 j 01:53 7°**8**56'40 19.95046 AU opposition max. Earth dist. -1840 Oct 13 j 14:43 5°**Y**27'51 18.46992 AU -1832 Sep 03 j 02:27 12°816'14 min. Earth dist. retrograde -1832 Nov 16 j 13:25 10°814'05 0°-12'-45 -1840 Dec 27 j 01:44 3°Y28'12 direct opposition -1832 Nov 17 j 04:07 10°**8**12'30 17.91684 AU min. Earth dist. -1839 Apr 14 j 02:13 7°**Υ**32'45 0°-33'-28 -1831 Jan 30 j 07:39 conjunction direct 8°**8**11'11 -1839 Apr 14 j 02:13 7°**Ƴ**32'46 minimum elong 0°33'29 -1839 Apr 13 j 23:17 -1831 May 20 j 17:13 12°**8**28'34 7°**Υ**32'20 20.43560 AU max. Earth dist. conjunction 0°-9'-46 retrograde -1839 Aug 03 j 04:09 11°**Y**43'36 minimum elong -1831 May 20 j 17:13 12°**8**28'34 0°09'46 opposition -1839 Oct 17 j 22:24 9°**Y**42'07 0°-35'-46 behind sun begin -1831 May 20 j 11:43 12°**8**27'45 -1839 Oct 18 j 01:12 9°**Y**41'49 -1831 May 20 j 22:43 12°**8**29'22 min. Earth dist. 18.40063 AU behind sun end -1839 Dec 31 j 12:45 7°**Υ**41'49 -1831 May 19 j 22:04 12°**8**25'41 19.88356 AU direct max. Earth dist. -1831 Jul 04 j 07:01 15°**8** conjunction -1838 Apr 18 j 18:55 11°**Υ**47'50 0°-31'-4 retrograde -1831 Sep 07 j 22:43 16°**8**46'35 minimum elong -1838 Apr 18 j 18:55 11°**Υ**47'50 0°31'05 -1831 Nov 15 j 04:12 15°R max. Earth dist. -1838 Apr 18 j 13:51 11°**Υ**47'06 20.36571 AU opposition -1831 Nov 21 j 04:56 14°**8**44'22 0°-8'-52 retrograde -1838 Aug 07 j 18:05 15°**Υ**59'32 min. Earth dist. -1831 Nov 21 j 20:57 14°842'38 17.85031 AU opposition -1838 Oct 22 j 08:50 13°**Υ**'57'52 0°-33'-2 direct -1830 Feb 04 j 02:11 12°841'07 min. Earth dist. -1838 Oct 22 j 14:08 13°Υ57'18 18.33044 AU -1830 Apr 21 j 08:26 15°8 direct -1837 Jan 04 j 22:41 11°**Y**57'09 conjunction -1830 May 25 j 17:20 17°**8**00'08 0°-6'-15 conjunction -1837 Apr 23 i 12:19 16° \(\gamma \) 04'39 0° -28'-30 minimum elong -1830 May 25 j 17:20 17°**8**00'08 0°06'14 minimum elong -1837 Apr 23 i 12:20 16° \(\gamma \) 04'39 0°28'30 behind sun begin -1830 May 25 j 10:55 16°859'12 max. Earth dist. -1837 Apr 23 j 05:20 16°**Y**03'37 20.29542 AU behind sun end -1830 May 25 j 23:45 17°**8**01'05 retrograde -1837 Aug 12 i 10:23 20°Υ'17'14 max. Earth dist. -1830 May 24 j 21:11 16°\(257'06\) 19.81726 AU -1837 Oct 26 j 19:45 18° Υ 15'24 0°-30'-5 -1830 Sep 12 j 17:55 21°818'58 opposition retrograde -1837 Oct 27 j 01:47 18° Υ 14'46 18.26007 AU -1830 Nov 25 j 21:25 19°**8**16'42 0°-4'-54 min. Earth dist. opposition -1836 Jan 09 j 11:10 16° Υ 14'16 -1830 Nov 26 j 15:17 19°**8**14'46 17.78446 AU direct min. Earth dist. -1829 Feb 08 j 19:26 17°**8**13'04 direct -1836 Apr 27 j 06:51 20°**Y**23'20 0°-25'-45 conjunction -1836 Apr 27 j 06:51 20°**Υ**23'20 0°25'45 -1829 May 30 j 17:58 21° \(\delta 33'41 \) 0°-2'-39 minimum elong conjunction -1836 Apr 26 j 22:04 20°**Y**22'03 20.22505 AU -1829 May 30 j 17:59 21°**8**33'41 max. Earth dist. minimum elong 0°02'38 -1836 Aug 16 j 01:43 24°**Υ**36'48 -1829 May 30 j 11:12 21°832'41 retrograde behind sun begin -1836 Oct 30 j 07:22 22°**Y**34'52 0°-26'-57 -1829 May 31 j 00:45 21°834'41 opposition behind sun end -1829 May 29 j 18:52 21° \(\begin{aligned} \b -1836 Oct 30 j 15:46 22° Υ 33'58 18.18992 AU min. Earth dist. max. Earth dist. -1835 Jan 12 j 22:22 20°**Y**33'21 -1829 Sep 17 j 14:50 25° **8**53'18 direct retrograde opposition -1829 Nov 30 j 14:38 23°**8**50'56 0°00'-52 -1829 Dec 01 j 09:54 23°848'51 17.71988 AU conjunction -1835 May 02 j 02:16 24°**Υ**'44'01 0°-22'-50 min. Earth dist. minimum elong -1835 May 02 j 02:16 24°**Y**44'01 0°22'50 direct -1828 Feb 13 j 16:16 21°**8**46'54 max. Earth dist. -1835 May 01 j 15:15 24°**Y**42'24 20.15527 AU asc. node -1828 Feb 18 j 09:45 21°**8**47'30 retrograde -1835 Aug 20 j 19:42 28°**Υ**58'25 -1835 Nov 03 j 19:40 26°**Y**56'23 0°-23'-38 conjunction -1828 Jun 03 j 19:37 26°**8**09'05 0°01'05 opposition min. Earth dist. -1835 Nov 04 j 04:52 26°**Υ**55'24 18.12048 AU -1828 Jun 03 j 19:38 26°**8**09'05 0°01'07 minimum elong direct -1834 Jan 17 j 12:25 24°**Y**54'29 -1828 Jun 03 j 12:51 26°808'04 behind sun begin -1828 Jun 04 i 02:25 26°810'05 behind sun end -1834 May 06 i 22:31 29°**Υ**'06'49 0°-19'-46 -1828 Jun 02 j 19:55 26°805'28 19.68809 AU conjunction max. Earth dist. $-1834 \text{ May } 06 \text{ j } 22:31 \quad 29^{\circ} \Upsilon 06'49 \quad 0^{\circ} 19'46$ minimum elong -1828 Aug 19 j 12:03 Π °0 -1834 May 06 j 10:07 29° γ 04'59 20.08613 AU max. Earth dist. retrograde -1828 Sep 21 i 11:16 0°**Ⅲ**29'22 -1834 May 21 i 22:31 0°8 -1828 Oct 24 i 20:24 30°R8 opposition retrograde -1834 Aug 25 j 12:39 3°822'08 -1828 Dec 04 j 08:34 28°\(\delta 26'57 \) 0°03'11 -1834 Nov 08 j 08:52 1°820'03 0°-20'-9 min. Earth dist. -1828 Dec 05 j 05:14 28°824'42 17.65693 AU opposition min. Earth dist. -1834 Nov 08 j 20:15 1°818'50 18.05179 AU direct -1827 Feb 17 j 12:31 26°822'31 -1827 May 27 j 06:44 -1834 Dec 12 j 05:21 30°R℃ $0^{\circ}\Pi$ -1833 Jan 22 j 01:06 29°**Υ**17'50 direct 0° 8 0°II46'10 0°04'47 -1833 Mar 03 j 10:07 conjunction -1827 Jun 08 j 21:41 minimum elong -1827 Jun 08 j 21:42 0°II46'10 0°04'49 -1827 Jun 08 j 15:04 -1833 May 11 j 19:43 3°**8**31'50 0°-16'-33 0°**I**I45'11 conjunction behind sun begin -1833 May 11 j 19:44 3°**8**31'50 0°16'33 -1827 Jun 09 j 04:19 0°II47'09 minimum elong behind sun end -1833 May 11 j 04:49 3°**8**29'37 20.01798 AU -1827 Jun 07 j 19:20 0°**Ц**42'08 19.62633 AU max. Earth dist. max. Earth dist. 7°**8**48'05 -1827 Sep 26 j 08:40 5°**Ⅱ**07'08 retrograde -1833 Aug 30 j 07:59 retrograde opposition -1833 Nov 12 j 22:36 5°**8**45'57 0°-16'-31 opposition -1827 Dec 09 j 03:22 3°**I**104'36 0°07'16 min. Earth dist. -1833 Nov 13 j 11:04 5°**8**44'36 17.98405 AU min. Earth dist. -1827 Dec 10 j 01:21 3°**I**02'12 17.59662 AU direct -1832 Jan 26 j 16:57 3°**8**43'23 direct -1826 Feb 22 j 10:31 0°**I**59'46 max. Earth dist. -1826 Jun 12 j 21:55 5°**Ⅱ**20'47 19.56746 AU -1832 May 15 j 18:05 7°**8**59'05 0°-13'-13 conjunction -1832 May 15 j 18:05 7°**8**59'05 0°13'12 -1826 Jun 14 j 00:14 5°**Д**24'50 0°08'24 minimum elong conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1826 in astronomical counting style is the year 1827 BCE in historical counting style. -1826 Jun 14 i 00:14 5°**Ⅱ**24'50 0°08'26 opposition -1818 Jan 15 j 11:34 10°553'39 0°36'31 minimum elong -1826 Jun 13 j 18:19 5°**Ⅱ**23'57 min. Earth dist. -1818 Jan 16 j 12:38 10°550'55 17.28043 AU behind sun begin -1826 Jun 14 j 06:09 5°**Ⅱ**25'43 -1818 Apr 01 j 13:53 behind sun end direct 8°9547'02 -1826 Oct 01 j 07:07 9°**Ⅱ**46'23 -1818 Jul 22 j 04:04 13°\$15'36 19.27203 AU max. Earth dist. retrograde 7°**II**43'46 0°11'18 -1826 Dec 13 j 22:52 opposition -1818 Jul 23 j 08:42 13°\$20'07 0°34'04 min. Earth dist. -1826 Dec 14 j 21:31 7°**Ⅱ**41'17 17.53945 AU conjunction -1818 Jul 23 j 08:42 13°520'07 direct -1825 Feb 27 j 08:56 5°**Ⅲ**38'34 minimum elong 0°34'06 -1818 Nov 08 j 07:56 17°544'24 max. Earth dist. -1825 Jun 17 j 22:53 10°**I**00'35 19.51217 AU retrograde 0°39'21 opposition -1817 Jan 20 j 12:34 15°5542'02 conjunction -1825 Jun 19 j 03:15 10°**Ⅲ**04'57 0°12'00 min. Earth dist. -1817 Jan 21 j 12:27 15°539'25 17.26579 AU minimum elong -1825 Jun 19 j 03:15 10°**Ⅱ**04'57 0°12'03 direct -1817 Apr 06 j 18:34 13°535'22 -1825 Jun 18 j 22:43 10°**Ⅲ**04'16 -1817 Jul 27 j 09:49 18°504'33 19.25987 AU behind sun begin max. Earth dist. -1825 Jun 19 j 07:47 10°**耳**05'38 behind sun end retrograde -1825 Oct 06 j 05:04 14°**Д**27'03 conjunction -1817 Jul 28 j 13:26 18°508'54 0°36'29 opposition -1825 Dec 18 j 19:00 12°**Ⅲ**24'21 0°15'18 minimum elong -1817 Jul 28 j 13:26 18°508'54 0°36'31 min. Earth dist. -1825 Dec 19 j 18:55 12°**Ⅲ**21'44 17.48638 AU retrograde -1817 Nov 13 j 07:49 22°533'12 opposition direct -1824 Mar 03 j 07:28 10°**Ⅲ**18'46 -1816 Jan 25 j 14:11 20°530'56 0°41'55 max. Earth dist. -1824 Jun 22 j 02:45 14°**II**42'05 19.46126 AU min. Earth dist. -1816 Jan 26 j 14:45 20°528'15 17.25620 AU direct -1816 Apr 10 j 22:11 18°524'15 conjunction -1824 Jun 23 j 06:50 14°**II**46'26 0°15'32 minimum elong -1824 Jun 23 j 06:49 14°**II**46'26 conjunction -1816 Aug 01 j 17:50 22°558'03 0°38'38 behind sun begin -1824 Jun 23 і 05:41 14°**Д**46'16 minimum elong -1816 Aug 01 j 17:50 22°\$58'03 0°38'39 behind sun end -1824 Jun 23 і 07:58 14°**Д**46'36 max. Earth dist. -1816 Jul 31 j 13:57 22°553'38 19.25282 AU retrograde -1824 Oct 10 j 05:27 19°**Ⅱ**09'00 retrograde -1816 Nov 17 j 09:28 27°522'17 opposition -1824 Dec 22 j 15:58 17°**Ⅲ**06'15 0°19'12 opposition -1815 Jan 29 j 16:11 25°\$20'06 0°44'10 min. Earth dist. -1824 Dec 23 j 15:51 17°**I**I03'38 17.43786 AU -1815 Jan 30 j 15:21 25°\$17'34 17.25165 AU min. Earth dist. -1823 Mar 08 j 07:31 15°**Ⅲ**00'22 direct -1815 Apr 16 j 03:55 23°513'25 direct -1823 Jun 27 j 05:12 19°**Ⅲ**24'38 19.41524 AU max Earth dist -1815 Aug 06 j 21:55 27°5647'19 0°40'31 conjunction -1823 Jun 28 j 10:31 19°**Ⅲ**29'11 0°18'59 -1815 Aug 06 j 21:55 27°5047'19 0°40'34 minimum elong conjunction -1823 Jun 28 j 10:30 19°**Ⅲ**29'11 -1815 Aug 05 j 19:51 27°543'11 19.25073 AU max. Earth dist. minimum elong -1823 Oct 15 j 03:55 23°**II**52'12 -1815 Sep 12 j 07:50 0°**Ω** retrograde -1823 Dec 27 j 13:45 21°**Ц**49'26 0°22'59 -1815 Nov 22 j 09:31 retrograde 2°**Ω**11'23 opposition -1823 Dec 28 j 14:37 21°**Ц**46'42 17.39473 AU -1814 Feb 03 j 18:41 0°Ω09'17 0°46'07 min. Earth dist. opposition -1822 Mar 13 j 06:54 19°**Ⅲ**43'16 -1814 Feb 04 j 17:56 0°**Ω**06'45 17.25209 AU direct min. Earth dist. -1822 Jul 02 j 09:47 24°**Д**08'41 19.37495 AU -1814 Feb 07 j 08:02 30°Rூ max. Earth dist. -1814 Apr 21 j 08:37 28°502'38 direct conjunction -1822 Jul 03 j 14:36 24° **Ⅲ**13'10 0°22'19 -1814 Jun 29 j 07:36 $0^{\circ}\Omega$ minimum elong -1822 Jul 03 j 14:36 24°**Ⅲ**13'10 0°22'21 max. Earth dist. -1814 Aug 10 j 23:22 2°**Ω**32'17 19.25384 AU retrograde -1822 Oct 20 j 05:11 28°**II**36'33 opposition -1821 Jan 01 j 12:04 26°**Д**33'49 0°26'39 conjunction -1814 Aug 12 j 01:33 2°**Ω**36'26 0°42'07 min. Earth dist. -1821 Jan 02 j 12:15 26°**Д**31'10 17.35735 AU -1814 Aug 12 j 01:33 2°**Ω**36'26 0°42'08 minimum elong -1821 Mar 18 j 08:12 24°**Ⅲ**27'28 -1814 Nov 27 j 10:47 7°**Ω**00'16 direct retrograde -1813 Feb 08 j 21:04 4°**Ω**58'13 0°47'45 opposition -1821 Jul 08 j 18:56 28°Д58'21 0°25'31 -1813 Feb 09 j 18:52 4° **Ω**55'51 17.25784 AU conjunction min. Earth dist. -1821 Jul 08 j 18:56 28° **II** 58'21 0°25'33 minimum elong direct -1813 Apr 26 i 14:22 2°Ω51'35 max. Earth dist. -1821 Jul 07 i 13:40 28° **I** 53'46 19.34051 AU max. Earth dist. -1813 Aug 16 j 05:00 7°**Ω**21'23 19.26224 AU -1821 Jul 25 i 08:08 0ಂತಾ -1813 Aug 17 j 04:51 retrograde -1821 Oct 25 i 04:23 3°9522'04 conjunction 7°Ω25'10 0°43'25 minimum elong -1820 Jan 06 i 11:15 1°9519'23 0°30'08 -1813 Aug 17 i 04:51 7°**Ω**25'10 0°43'27 opposition min. Earth dist. -1820 Jan 07 j 12:25 1°516'37 17.32596 AU retrograde -1813 Dec 02 j 10:53 $11^{\circ}\Omega$ 48'38 -1820 Feb 08 j 02:42 30°RⅡ -1812 Feb 13 j 23:53 9°Ω46'40 0°49'01 opposition -1820 Mar 22 j 08:53 29°**Ⅲ**12'53 -1812 Feb 14 j 21:06 min. Earth dist. 9°**Ω**44'22 17.26888 AU direct -1820 May 03 j 22:52 0ಂತಾ direct -1812 Apr 30 j 18:45 7°**Ω**40'06 max. Earth dist. -1812 Aug 20 j 07:49 12°**Ω**09'33 19.27616 AU -1820 Jul 12 j 23:29 3°9544'39 0°28'33 conjunction -1820 Jul 12 j 23:29 3°5544'39 0°28'36 conjunction -1812 Aug 21 j 07:17 12° Ω 13'16 0°44'24 minimum elong -1820 Jul 11 j 18:29 3°540'06 19.31207 AU -1812 Aug 21 j 07:17 12° Ω 13'16 0°44'27 max. Earth dist. minimum elong -1820 Oct 29 j 06:09 -1812 Oct 07 j 11:27 15°**Ω** retrograde 8°9508'37 -1819 Jan 10 j 10:58 -1812 Dec 06 j 11:56 $16^{\circ}\Omega$ 36'19 opposition 6°506'02 0°33'26 retrograde -1811 Feb 08 j 03:51 15°RΩ min. Earth dist. -1819 Jan 11 j 11:09 6°503'23 17.30036 AU direct -1819 Mar 27 j 11:57 3°959'27 opposition -1811 Feb 18 j 02:42 14° Ω 34'23 0°49'57 max. Earth dist. -1819 Jul 16 j 23:35 8°527'28 19.28926 AU min. Earth dist. -1811 Feb 18 j 22:17 14° Ω 32'16 17.28572 AU direct -1811 May 05 j 23:51 $12^{\circ}\Omega$ 27'54 conjunction -1819 Jul 18 j 04:13 8°931'58 0°31'25 -1811 Jul 24 j 14:12 15°**Ω** -1819 Jul 18 j 04:13 8°931'58 minimum elong 0°31'27 -1819 Nov 03 j 05:52 12°556'08 -1811 Aug 26 j 09:11 17°**Ω**00'30 0°45'05 retrograde conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1811 in astronomical counting style is the year 1812 BCE in historical counting style. -1811 Aug 26 j 09:11 17°**Ω**00'30 0°45'06 minimum elong -1803 Oct 02 j 18:57 24° m 34'26 0°39'37 minimum elong -1811 Aug 25 j 12:34 16° **Ω**57'14 19.29598 AU max. Earth dist. -1803 Oct 02 j 14:49 24° mp 33'47 19.65797 AU max Earth dist -1811 Dec 11 j 11:47 $21^{\circ}\Omega 23'04$ -1802 Jan 17 j 19:24 28° m 51'23 retrograde retrograde -1802 Apr 02 j 20:51 26° M 50'39 -1810 Feb 23 j 05:32 19° Ω 21'11 0°50'31 opposition 0°43'03 opposition -1810 Feb 23 j 23:38 19°**Ω**19'14 17.30850 AU -1802 Apr 02 j 22:52 26° Mp 50'26 17.68896 AU min. Earth dist. min. Earth dist. -1810 May 11 j 03:40 17°**Ω**14'51 -1802 Jun 19 j 04:30 24° Mp 46'59 direct direct -1810 Aug 31 j 10:07 21° **Ω**46'43 0°45'27 -1802 Oct 07 j 13:25 29° m 09'16 0°37'41 conjunction conjunction -1810 Aug 31 j 10:07 21° **Ω**46'43 0°45'28 -1802 Oct 07 j 13:25 29° m 09'16 0°37'41 minimum elong minimum elong -1802 Oct 07 j 11:46 29° m 09'01 19.72047 AU max. Earth dist. -1810 Aug 30 j 14:31 21° **Ω** 43'37 19.32191 AU max. Earth dist. retrograde -1810 Dec 16 j 11:59 $26^{\circ}\Omega$ 08'44 -1802 Oct 21 j 04:35 0∘**⊽** -1809 Feb 28 j 08:15 $24^{\circ}\Omega 06'55$ $0^{\circ}50'45$ -1801 Jan 22 j 13:49 opposition retrograde 3°**£**25′20 -1809 Mar 01 j 00:39 $24^{\circ}\Omega$ 05'10 17.33761 AU -1801 Apr 07 j 21:07 min. Earth dist. opposition 1°**£**24'45 0°40'47 direct -1809 May 16 j 08:07 $22^{\circ}\Omega$ 00'45 min. Earth dist. -1801 Apr 07 j 22:18 1°**£**24'38 17.75236 AU -1801 May 15 j 04:56 30°R, Mp conjunction -1809 Sep 05 j 10:28 26° **Ω**31'48 0°45'30 direct -1801 Jun 24 j 03:28 29° m 21'29 minimum elong -1809 Sep 05 j 10:28 26° **Ω**31'48 0°45'30 -1801 Aug 01 j 22:06 0∘<u>ଫ</u> max. Earth dist. -1809 Sep 04 j 17:47 26° Ω29'10 19.35418 AU -1809 Nov 07 j 09:13 0° m conjunction -1801 Oct 12 j 06:48 3°**£**42'10 0°35'33 retrograde -1809 Dec 21 j 10:52 0° m 53'12 minimum elong -1801 Oct 12 j 06:48 3°**£**42'10 0°35'32 -1808 Feb 05 j 04:04 30°RΩ max. Earth dist. -1801 Oct 12 j 06:27 3°**2**42'07 19.78469 AU opposition -1808 Mar 04 i 10:47 $28^{\circ}\Omega51'30$ $0^{\circ}50'37$ retrograde -1800 Jan 27 i 09:42 7°**£**57'21 min. Earth dist. -1808 Mar 05 i 00:57 $28^{\circ}\Omega 49'59$ 17.37286 AU opposition -1800 Apr 11 j 20:37 5°**£**56'53 0°38'15 direct -1808 May 20 j 12:23 $26^{\circ}\Omega 45'36$ min. Earth dist. -1800 Apr 11 i 18:50 5°**2**57'04 17.81718 AU -1808 Aug 20 j 05:04 direct -1800 Jun 28 j 03:47 3°**£**53'59 0° m -1808 Sep 09 j 09:58 1° m 15'42 0°45'14 -1800 Oct 15 j 23:23 8°**£**13'04 0°33'12 conjunction conjunction -1808 Sep 09 j 09:58 1° m 15'42 0°45'15 -1800 Oct 15 j 23:23 8°**£**13'04 minimum elong minimum elong 0°33'12 -1808 Sep 08 j 18:52 1° 10 13'18 19.39261 AU -1800 Oct 16 j 01:49 8° **2**13'27 19.85014 AU max. Earth dist. max. Earth dist. -1808 Dec 25 j 09:29 5° m 36'27 -1799 Jan 31 j 02:55 12° **2**27'20 retrograde retrograde -1807 Mar 09 j 13:19 3° m 34'53 0°50'09 -1799 Apr 16 j 19:39 10° **2**26'57 0°35'31 opposition opposition -1807 Mar 10 j 01:53 -1799 Apr 16 j 16:56 10° **2**27'13 17.88321 AU min. Earth dist. 3° Mg 33'33 17.41431 AU min. Earth dist. 1°m/29'18 -1799 Jul 03 j 01:29 -1807 May 25 j 16:00 direct 8°**£**24'25 direct -1807 Sep 14 j 08:34 5° m 58'19 0°44'41 -1799 Oct 20 j 14:44 12°**2**41'50 0°30'39 conjunction conjunction -1807 Sep 14 j 08:34 5° **m** 58'19 -1799 Oct 20 j 14:44 12°**2**41'50 0°30'38 minimum elong 0°44'42 minimum elong -1807 Sep 13 j 20:13 5° m 56'22 19.43697 AU -1799 Oct 20 j 18:23 12° • 42'23 19.91680 AU max. Earth dist. max. Earth dist. retrograde -1807 Dec 30 j 07:49 10° m 18'24 retrograde -1798 Feb 04 j 21:07 16° **2**55'10 -1806 Mar 14 j 15:29 8° mg 17'00 0°49'22 opposition -1798 Apr 21 j 17:43 14° **2**54'51 0°32'35 opposition min. Earth dist. -1806 Mar 15 j 01:22 8° Mp 15'57 17.46117 AU min. Earth dist. -1798 Apr 21 j 12:05 14°**£**55'26 17.95036 AU direct -1806 May 30 j 20:17 6° Mp 11'46 direct -1798 Jul 07 j 23:39 12°**♀**52'41 -1806 Sep 19 j 06:27 10° Mp 39'37 0°43'50 -1798 Oct 25 j 05:18 17°**♀**08'26 0°27'57 conjunction conjunction -1806 Sep 19 j 06:27 10° mg 39'37 -1798 Oct 25 j 05:18 17°**♀**08'26 0°27'57 minimum elong minimum elong -1806 Sep 18 j 20:06 10° My 37'59 19.48637 AU max. Earth dist. -1798 Oct 25 j 12:00 17°**2**09'27 19.98445 AU max. Earth dist. -1805 Jan 04 i 04:42 14° m 58'58 -1797 Feb 09 i 12:55 21° \alpha 20'50 retrograde retrograde -1805 Mar 19 j 17:19 12° m 57'45 0°48'14 opposition opposition -1797 Apr 26 j 15:03 19° \(\Omega\) 20'35 0°29'29 -1805 Mar 20 j 02:05 12° m 56'49 17.51288 AU min. Earth dist. min. Earth dist. -1797 Apr 26 i 08:17 19° **2**21'17 18.01857 AU -1805 Jun 04 j 22:35 10° m 52'53 direct direct -1797 Jul 12 j 20:06 17°**£**18'47 -1805 Sep 24 i 03:31 15° m 19'29 0°42'41 -1797 Oct 29 i 18:46 21° \(\Omega\) 32'51 0°25'07 conjunction conjunction -1805 Sep 24 j 03:31 15° m 19'29 0°42'43 -1797 Oct 29 j 18:47 21° **△**32'51 0°25'05 minimum elong minimum elong max. Earth dist. -1805 Sep 23 j 19:21 15° mp 18'12 19.54024 AU max. Earth dist. -1797 Oct 30 j 02:41 21°**2**34'03 20.05336 AU -1804 Jan 09 j 02:31 19° m 38'04 retrograde retrograde -1796 Feb 14 j 05:42 25° **△**44'21 opposition -1804 Mar 23 j 18:54 17° m 37'01 0°46'48 opposition -1796 Apr 30 j 11:39 23° **△**44'10 0°26'15 min. Earth dist. -1804 Mar 24 j 00:49 17° m 36'24 17.56852 AU min. Earth dist. -1796 Apr 30 j 01:54 23°**Ω**45'10 18.08816 AU direct -1804 Jun 09 j 02:03 15° m 32'34 direct -1796 Jul 16 j 15:48 21°**2**42'45 -1804 Sep 27 j 23:39 19° m 57'48 0°41'17 -1796 Nov 02 j 07:23 25°**♀**55'09 0°22'09 conjunction conjunction -1804 Sep 27 j 23:39 19° m 57'48 -1796 Nov 02 j 07:23 25°**⊆**55'09 0°22'08 minimum elong 0°41'17 minimum elong -1804 Sep 27 j 17:50 19° m 56'53 19.59759 AU -1796 Nov 02 j 18:34 25°**⊆**56'51 20.12352 AU max. Earth dist. max. Earth dist. retrograde -1803 Jan 12 j 22:14 24° m 15'35 -1795 Feb 03 j 00:03 0° M opposition -1803 Mar 28 j 20:16 22° m 14'43 0°45'04 retrograde -1795 Feb 17 j 20:24 0°M05'46 min. Earth dist. -1803 Mar 29 j 01:11 22° m 14'12 17.62746 AU -1795 Mar 04 j 20:57 30°**₹**Ω direct -1803 Jun 14 j 02:33 20° Mp 10'39 opposition -1795 May 05 j 07:34 28°**△**05'41 0°22'53 -1795 May 04 j 20:19 28°**೨**06'50 18.15891 AU min. Earth dist.

direct

-1795 Jul 21 j 11:07 26°**♀**04'42

-1803 Oct 02 j 18:57 24° m/34'26 0°39'36

conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, page 8 Attention, astronomical year style is used: The year -1795 in astronomical counting style is the year 1796 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -1795	in astronomical cou	inting style is the year	1796 BCE in historical of	counting style	
	-1795 Nov 02 j 13:25	0°M		behind sun end	-1789 Dec 02 j 09:37	25°M41'54	
				max. Earth dist.	-1789 Dec 03 j 00:46	25°M44'10	20.61399 AU
conjunction	-1795 Nov 06 j 19:07	0° ™ 15′28	0°19'05	retrograde	-1788 Mar 19 j 16:14		
minimum elong	-1795 Nov 06 j 19:07	0° ™ 15′28	0°19'04	min. Earth dist.	-1788 Jun 04 j 06:53	27°ML49'22	18.64548 AU
max. Earth dist.	-1795 Nov 07 j 07:20	0° ™ 17'18	20.19485 AU	opposition	-1788 Jun 05 j 05:05	27°M47'08	0°-2'-25
retrograde	-1794 Feb 22 j 11:54	4°M25'13		direct	-1788 Aug 20 j 21:03	25°M49'04	
opposition	-1794 May 10 j 02:24	2°M25'15					
min. Earth dist.	-1794 May 09 j 12:33		18.23072 AU	conjunction	-1788 Dec 05 j 10:33		0°-3'-53
direct	-1794 Jul 26 j 04:27	0°M24'41		minimum elong	-1788 Dec 05 j 10:33		0°03'55
				behind sun begin	-1788 Dec 05 j 04:05		
conjunction	-1794 Nov 11 j 06:13	4°M33'53		behind sun end	-1788 Dec 05 j 17:00		20 (5502 17)
minimum elong	-1794 Nov 11 j 06:13	4°M33'53	0°15'55	max. Earth dist.	-1788 Dec 06 j 10:12		20.67582 AU
behind sun begin	-1794 Nov 11 j 04:46	4°M33'41			-1788 Dec 08 j 08:13	0° ∡¹	
behind sun end	-1794 Nov 11 j 07:40	4°M34'06	20.26600 ATT	retrograde	-1787 Mar 24 j 02:15	3° ∡ 754'21	00 (1.2
max. Earth dist.	-1794 Nov 11 j 21:28		20.26688 AU	opposition	-1787 Jun 09 j 19:01	1° ∡ 755'18	
retrograde	-1793 Feb 27 j 01:28	8°M42'49	0015152	min. Earth dist.	-1787 Jun 08 j 19:50		18.70537 AU
opposition	-1793 May 14 j 20:40 -1793 May 14 j 05:22	6°M43'01	18.30283 AU	J:4	-1787 Aug 15 j 10:56		
min. Earth dist.	-1793 May 14 J 05:22 -1793 Jul 30 j 22:12	4°M42'55	18.30283 AU	direct	-1787 Aug 25 j 09:49	29° ™ 57'32 0° ∡ 7	
direct	-1/93 Jul 30 J 22.12	4 11642 33			-1787 Sep 04 j 04:36	0 x ·	
conjunction	-1793 Nov 15 j 16:17	8°M50'33	0°12'44	conjunction	-1787 Dec 09 j 17:26	3° ∡ ¹56'54	0°-7'-7
minimum elong	-1793 Nov 15 j 16:17	8°M50'33		minimum elong	-1787 Dec 09 j 17:26	3° ∡ 756'54	
behind sun begin	-1793 Nov 15 j 12:04	8°M49'56	0 12 45	behind sun begin	-1787 Dec 09 j 11:24	3° ∡ 756′02	0 07 11
behind sun end	-1793 Nov 15 j 20:30	8°M51'10		behind sun end	-1787 Dec 09 j 23:28	3° × 757'46	
max. Earth dist.	-1793 Nov 16 j 08:21		20.33900 AU	max. Earth dist.	-1787 Dec 10 j 16:47		20.73372 AU
retrograde	-1792 Mar 02 j 15:49	12°M58'42	20.55,00110	retrograde	-1786 Mar 28 j 12:41	8° ₹ 100'55	20.75572110
opposition	-1792 May 18 j 14:14	10°M59'02	0°12'16	min. Earth dist.	-1786 Jun 13 j 08:32		18.76135 AU
min. Earth dist.	-1792 May 17 j 20:47		18.37481 AU	opposition	-1786 Jun 14 j 08:05	6° ∡ 101'54	
direct	-1792 Aug 03 j 13:43	8°M59'23		direct	-1786 Aug 29 j 19:36	4° ∡ ¹04'22	
	<i>C</i> 3				e j		
conjunction	-1792 Nov 19 j 01:58	13°M05'32	0°09'28	conjunction	-1786 Dec 13 j 23:55	8° ∡ ¹02'34	0°-10'-19
minimum elong	-1792 Nov 19 j 01:57	13°M05'32	0°09'26	minimum elong	-1786 Dec 13 j 23:55	8° ∡ ¹02'34	0°10'21
behind sun begin	-1792 Nov 18 j 20:28	13°M04'44		behind sun begin	-1786 Dec 13 j 18:43	8° ∡ 101'50	
behind sun end	-1792 Nov 19 j 07:27	13°M06'20		behind sun end	-1786 Dec 14 j 05:07	8° ₹ 03'19	
max. Earth dist.	-1792 Nov 19 j 20:49	13°M08'22	20.41053 AU	max. Earth dist.	-1786 Dec 15 j 01:03	8° ∡ ¹06′15	20.78763 AU
	-1792 Dec 22 j 02:02	15° ™		retrograde	-1785 Apr 01 j 22:07	12° ∡ ¹05'59	
retrograde	-1791 Mar 07 j 04:00	17°M12'55		opposition	-1785 Jun 18 j 20:28	10° ∡ ¹06'57	0°-13'-8
opposition	-1791 May 23 j 07:00	15°M13'26	0°08'36	min. Earth dist.	-1785 Jun 17 j 19:56		18.81323 AU
min. Earth dist.	-1791 May 22 j 12:16	15°M15'19	18.44575 AU	direct	-1785 Sep 03 j 07:13	8° ₹ 09'39	
	-1791 May 28 j 20:09	15°RM					
direct	-1791 Aug 08 j 05:38	13°M14'13		conjunction	-1785 Dec 18 j 05:38	12° ∡ ¹06'42	0°-13'-26
	-1791 Oct 13 j 07:47	15° ™		minimum elong	-1785 Dec 18 j 05:37	12° ∡ ¹06'42	0°13'30
				behind sun begin	-1785 Dec 18 j 01:51	12° ∡ ¹06′10	
conjunction	-1791 Nov 23 j 10:49	17°M18'54	0°06'11	behind sun end	-1785 Dec 18 j 09:23	12° ∡ 07'15	
minimum elong	-1791 Nov 23 j 10:49	17°M18'54	0°06'10	max. Earth dist.	-1785 Dec 19 j 06:33		20.83762 AU
behind sun begin	-1791 Nov 23 j 04:36	17°M18'00		retrograde	-1784 Apr 05 j 07:21		
behind sun end	-1791 Nov 23 j 17:01	17° ™ 19'48		min. Earth dist.	-1784 Jun 21 j 07:30		18.86153 AU
max. Earth dist.	-1791 Nov 24 j 06:05		20.48072 AU	opposition	-1784 Jun 22 j 08:16		0°-16'-33
retrograde	-1790 Mar 11 j 17:26	21°M25'35		direct	-1784 Sep 06 j 15:32	12° ∡ 13′24	
opposition	-1790 May 27 j 23:03	19°M26'13	0°04'56			_	
min. Earth dist.	-1790 May 27 j 02:52		18.51507 AU	conjunction	-1784 Dec 21 j 11:12		0°-16'-28
direct	-1790 Aug 12 j 19:10	17°M27'25		minimum elong	-1784 Dec 21 j 11:12		0°16'31
				max. Earth dist.	-1784 Dec 22 j 13:57		20.88411 AU
conjunction	-1790 Nov 27 j 19:17			retrograde	-1783 Apr 09 j 16:10		
minimum elong	-1790 Nov 27 j 19:17		0°02'50	opposition	-1783 Jun 26 j 19:05		0°-19'-52
behind sun begin	-1790 Nov 27 j 12:47			min. Earth dist.	-1783 Jun 25 j 17:14		18.90636 AU
behind sun end	-1790 Nov 28 j 01:48		20.54055.477	direct	-1783 Sep 11 j 01:28	16° × ′15'46	
max. Earth dist.	-1790 Nov 28 j 16:55		20.54876 AU		1702 5 251111	200 71011	00 101 27
retrograde	-1789 Mar 16 j 04:04		000111.7	conjunction	-1783 Dec 25 j 16:15		0°-19'-25
opposition	-1789 Jun 01 j 14:21	23°M37'27		minimum elong	-1783 Dec 25 j 16:15		0°19'28
min. Earth dist.	-1789 May 31 j 17:03		18.58176 AU	max. Earth dist.	-1783 Dec 26 j 18:39		20.92/30 AU
direct	-1789 Aug 17 j 09:18	21°M39'02		retrograde	-1782 Apr 14 j 00:40		10 04010 411
desc. node	-1789 Oct 04 j 17:21	22 ~111. 37'30		min. Earth dist.	-1782 Jun 30 j 03:34		
aaniumati	1700 Dag 02 : 02 00	250m 40150	00001.22	opposition	-1782 Jul 01 j 05:27		0°-23'-3
conjunction	-1789 Dec 02 j 03:08		0°00'-32	direct	-1782 Sep 15 j 08:33	20 X 10 33	
minimum elong	-1789 Dec 02 j 03:07		0°00'35	agniumation	1702 Day 20 : 21.00	240.71110/	00 221 15
behind sun begin	-1789 Dec 01 j 20:36	23 IIG40'02		conjunction	-1782 Dec 29 j 21:06	∠4 ×11106	0°-22'-15

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1782 in astronomical counting style is the year 1783 BCE in historical counting style. -1782 Dec 29 j 21:06 24° ₹ 11'06 0°22'18 minimum elong -1773 Jan 30 j 10:37 25°る53'58 0°39'56 minimum elong -1782 Dec 31 j 01:08 24° **x** 15'09 20.96737 AU max. Earth dist. -1773 Jan 31 j 13:04 25°る57'44 21.14048 AU max Earth dist -1781 Apr 18 j 09:03 28° ₹ 12'38 -1773 May 21 j 03:02 29°る54'50 retrograde retrograde -1781 Jul 05 j 15:06 26° ₹ 13'35 0°-26'-7 -1773 Aug 06 j 05:43 27°₹58'16 19.14021 AU opposition min. Earth dist. -1773 Aug 07 j 05:47 27°る55'51 -1781 Jul 04 j 12:06 26° ₹ 16'17 18.98655 AU min. Earth dist. opposition 0°-44'-53 -1781 Sep 19 j 16:40 24° ₹ 17'00 -1773 Oct 21 j 12:10 26°♂00'05 direct direct -1780 Jan 03 j 01:40 28° ₹ 10'27 0°-24'-58 -1772 Feb 03 j 15:53 29°**궁**51'02 0°-41'-20 conjunction conjunction -1772 Feb 03 j 15:53 29°₹51'02 0°41'23 -1780 Jan 03 j 01:39 28° ₹ 10'27 0°25'00 minimum elong minimum elong -1780 Jan 04 j 05:11 28° ₹ 14'26 21.00421 AU -1772 Feb 04 j 16:23 29° **궁**54'31 21.13759 AU max. Earth dist. max. Earth dist. -1780 Feb 04 j 21:15 0°る -1772 Feb 06 j 06:51 0°≈ -1780 Apr 21 j 17:12 2°**る**11'43 -1772 May 24 j 10:19 retrograde retrograde 3°**≈**52′03 -1780 Jul 07 j 21:39 0°る15'20 19.02182 AU -1772 Aug 10 j 12:21 min. Earth dist. opposition 1°≈52'56 0°-46'-22 opposition -1780 Jul 09 j 00:23 0°る12'41 0°-29'-3 min. Earth dist. -1772 Aug 09 j 14:11 1°≈55'09 19.13449 AU -1780 Jul 14 j 07:42 30°R.**✓** -1772 Oct 13 j 23:52 30°R₹ direct -1780 Sep 22 j 22:36 28°**₰**16'16 direct -1772 Oct 24 j 15:25 29°る57'04 -1780 Nov 27 j 18:16 0°궁 -1772 Nov 04 j 08:20 0°≈ conjunction -1779 Jan 06 j 06:15 2°る09'06 0°-27'-33 conjunction -1771 Feb 06 j 21:31 3°≈48'04 0°-42'-34 minimum elong -1779 Jan 06 j 06:14 2°る09'06 0°27'37 minimum elong -1771 Feb 06 j 21:31 3°≈48'04 0°42'36 max. Earth dist. -1779 Jan 07 j 11:06 2°る13'15 21.03767 AU max. Earth dist. -1771 Feb 07 j 21:59 3°≈51'33 21.12914 AU retrograde -1779 Apr 26 i 01:41 6°**ප**10'07 retrograde -1771 May 28 j 18:26 7°≈49'14 min. Earth dist. -1779 Jul 12 i 05:29 4°る13'52 19.05334 AU opposition -1771 Aug 14 j 18:30 5°≈49'59 0°-47'-37 opposition -1779 Jul 13 i 09:02 4°**ට**11'07 0°-31'-50 min. Earth dist. -1771 Aug 13 j 20:28 5°≈52'12 19.12332 AU direct -1779 Sep 27 j 05:18 2°る14'54 direct -1771 Oct 28 j 21:39 3°≈54'00 -1778 Jan 10 j 10:39 6°**ප**07'11 0°-30'00 -1770 Feb 11 i 03:11 7°**≈**45'08 0°-43'-35 conjunction conjunction -1778 Jan 10 j 10:39 6°る07'11 0°30'03 -1770 Feb 11 j 03:11 7°≈45'08 0°43'39 minimum elong minimum elong -1778 Jan 11 j 14:37 6°る11'11 21.06719 AU -1770 Feb 12 j 01:41 max. Earth dist. max. Earth dist. 7°≈48'20 21.11550 AU -1778 Apr 30 j 09:25 10°**⋜**08'03 -1770 Jun 02 j 02:02 11°≈46'31 retrograde retrograde 9°**≈**49'09 19.10741 AU -1778 Jul 17 j 17:16 8°る09'06 0°-34'-27 -1770 Aug 18 j 04:25 opposition min. Earth dist. -1778 Jul 16 j 14:32 -1770 Aug 19 j 00:33 min. Earth dist. 8°る11'46 19.08085 AU 9°≈47'07 0°-48'-38 opposition -1778 Oct 01 j 10:10 -1770 Nov 02 j 00:56 direct 6°る13'02 direct 7°≈50'58 -1777 Jan 14 j 15:14 10°る04'53 0°-32'-19 -1769 Feb 15 j 09:20 11°≈42'22 0°-44'-25 conjunction conjunction -1769 Feb 15 j 09:20 11°≈42'22 0°44'27 -1777 Jan 14 j 15:14 10°중04'53 0°32'22 minimum elong minimum elong -1777 Jan 15 j 20:10 10°중09'01 21.09248 AU -1769 Feb 16 j 07:51 11°≈45'34 21.09744 AU max. Earth dist. max. Earth dist. retrograde -1777 May 04 j 18:13 14°**⋜**05'38 -1769 Apr 24 j 03:15 15°≈ min. Earth dist. -1777 Jul 20 j 21:54 12°**궁**09'27 19.10376 AU retrograde -1769 Jun 06 j 09:56 15°≈44'01 opposition -1777 Jul 22 j 01:08 12°**궁**06'44 0°-36'-55 -1769 Jul 20 j 11:59 15°R≈ direct -1777 Oct 05 j 16:19 10°る10'50 min. Earth dist. -1769 Aug 22 j 10:16 13°≈46'30 19.08723 AU -1769 Aug 23 j 06:23 13°≈44′28 opposition -1776 Jan 18 j 19:39 14°**⋜**02'19 0°-34'-28 direct -1769 Nov 06 j 06:23 11°≈48'09 conjunction -1776 Jan 18 j 19:39 14°♂02'19 0°34'30 -1768 Feb 07 j 21:57 15°≈ minimum elong -1776 Jan 19 j 23:22 14° ₹ 06'17 21.11292 AU max. Earth dist. -1776 May 08 j 01:48 18°る03'04 -1768 Feb 19 i 15:38 15°≈39'53 0°-45'-1 retrograde conjunction -1776 Jul 24 j 06:57 16°**중**06'46 19.12169 AU -1768 Feb 19 i 15:38 15°≈39'53 0°45'04 min. Earth dist. minimum elong -1776 Jul 25 j 08:51 16°**⋜**04'11 -1768 Feb 20 j 12:10 15°≈42'48 21.07529 AU opposition 0°-39'-12 max. Earth dist. -1776 Oct 08 j 20:16 14° ₹ 08'23 direct retrograde -1768 Jun 09 j 17:47 19°≈41'53 opposition -1768 Aug 26 j 12:20 17°≈42'11 0°-50'00 -1775 Jan 22 i 00:34 17°₹59'37 0°-36'-27 min. Earth dist. -1768 Aug 25 j 18:11 17°≈44'01 19.06318 AU conjunction -1775 Jan 22 i 00:34 17°₹59'37 0°36'30 direct -1768 Nov 09 j 10:00 15°≈45'42 minimum elong max. Earth dist. -1775 Jan 23 j 04:44 18°る03'39 21.12807 AU -1775 May 12 j 10:59 22°る00'21 retrograde conjunction -1767 Feb 22 j 22:41 19°≈37'53 0°-45'-25 opposition -1775 Jul 29 j 15:56 20°**궁**01'29 0°-41'-18 minimum elong -1767 Feb 22 j 22:41 19°≈37'53 0°45'27 min. Earth dist. -1775 Jul 28 j 14:02 20°정04'04 19.13392 AU max. Earth dist. -1767 Feb 23 j 19:01 19°≈40'47 21.04941 AU direct -1775 Oct 13 j 02:22 18°**⋜**05'45 retrograde -1767 Jun 14 j 02:26 23°≈40'16 -1767 Aug 30 j 17:59 21°≈40'27 0°-50'-19 opposition -1774 Jan 26 j 05:30 21° ₹ 56'50 0°-38'-16 -1767 Aug 30 j 00:02 21°≈42'17 19.03540 AU conjunction min. Earth dist. -1774 Jan 26 j 05:29 21° 궁56'50 0°38'18 direct -1767 Nov 13 j 15:04 19°≈43'48 minimum elong -1774 Jan 27 j 07:51 22°る00'35 21.13731 AU max. Earth dist. retrograde -1774 May 16 j 18:11 25°る57'37 conjunction -1766 Feb 27 j 06:02 23°≈36'32 0°-45'-36 opposition -1774 Aug 02 j 23:03 23°중58'43 0°-43'-12 minimum elong -1766 Feb 27 j 06:02 23°≈36'32 0°45'38 min. Earth dist. -1774 Aug 01 j 22:53 24°**궁**01'08 19.14018 AU max. Earth dist. -1766 Feb 28 j 00:13 23°≈39'07 21.01986 AU direct -1774 Oct 17 j 05:43 22°る02'59 retrograde -1766 Jun 18 j 10:24 27°≈39'24 -1766 Sep 03 j 08:12 25°≈41'05 19.00409 AU min. Earth dist.

opposition

-1766 Sep 04 j 00:01 25°≈39'28

0°-50'-24

-1773 Jan 30 j 10:37 25°₹53'58 0°-39'-54

conjunction

Attention, astronomical year style is used: The year -1766 in astronomical counting style is the year 1767 BCE in historical counting style.							
direct	-1766 Nov 17 j 18:52		iii astronomicai cou	opposition	-1758 Oct 06 j 08:36		
direct	-1/00 NOV 1/ J 18.32	23 ~42 30		min. Earth dist.	-1758 Oct 06 j 06:54		
aaniumatian	1765 Mar 02: 12:57	2790026102	0°-45'-34	direct	-1758 Dec 19 j 21:29	26° X 15'18	18.009// AU
conjunction minimum elong	-1765 Mar 03 j 13:57 -1765 Mar 03 j 13:57		0°45'36	direct	·	20 π 13 18 0° Υ	
max. Earth dist.	3	27°≈36'02	20.98685 AU		-1757 Apr 01 j 11:35	UI	
max. Earth dist.	-1765 Mar 04 j 07:49	2/°≈38°34 0° ∺	20.98085 AU	:	1757 A 0(: 00.45	0° Ƴ 16'58	00 271 12
. 1	-1765 Apr 17 j 14:07			conjunction	-1757 Apr 06 j 08:45		0°-37'-13
retrograde	-1765 Jun 22 j 20:29	1° ¥ 39'25		minimum elong	-1757 Apr 06 j 08:45	0°Υ16'58	0°37'13
***	-1765 Aug 30 j 19:34		00.501.15	max. Earth dist.	-1757 Apr 06 j 10:12	4° Υ 26'03	20.57714 AU
opposition	-1765 Sep 08 j 06:05	29°≈39'23	0°-50'-15	retrograde	-1757 Jul 26 j 13:39		00 401 7
min. Earth dist.	-1765 Sep 07 j 14:36		18.96919 AU	opposition	-1757 Oct 10 j 17:12	2° Υ 24'55	
direct	-1765 Nov 22 j 00:26	27°≈42'23		min. Earth dist.	-1757 Oct 10 j 16:19		18.54368 AU
	-1764 Feb 06 j 22:36	0° ℋ		direct	-1757 Dec 24 j 07:28	0° Y 25′29	
aaniumatian	-1764 Mar 06 j 22:34	101/26/22	0°-45'-19	agnismation	1756 Amr. 00: 22:27	4° Υ 28'30	0°-35'-12
conjunction minimum elong	-1764 Mar 06 j 22:35	1° ∺ 36'32		conjunction minimum elong	-1756 Apr 09 j 23:37 -1756 Apr 09 j 23:37	4° Υ 28'30	0°35'13
max. Earth dist.			20.95015 AU	max. Earth dist.	-1756 Apr 09 j 23:37		20.50996 AU
	-1764 Mar 07 j 14:04		20.93013 AU			4 1 28 20 8° Υ 38'24	20.30996 AU
retrograde	-1764 Jun 26 j 05:00	5°) 40′30	00 401 51	retrograde	-1756 Jul 30 j 01:44		00.271.46
opposition	-1764 Sep 11 j 12:22	3°) 40′24		opposition	-1756 Oct 14 j 02:18		0°-37'-46
min. Earth dist.	-1764 Sep 10 j 23:25		18.93060 AU	min. Earth dist.	-1756 Oct 14 j 04:11		18.47565 AU
direct	-1764 Nov 25 j 04:18	1° ¥ 43'12		direct	-1756 Dec 27 j 15:37	4° Ƴ 37'13	
:	17(2 M 11:00.07	50W20112	09 44! 50	:	1755 A 14: 15:22	000041120	09 221 59
conjunction	-1763 Mar 11 j 08:07 -1763 Mar 11 j 08:07	5°) 38'13 5°) 38'13		conjunction minimum elong	-1755 Apr 14 j 15:22 -1755 Apr 14 j 15:22	8° Y 41'39 8° Y 41'39	0°-32'-58 0°32'58
minimum elong	3			Č	1 3		20.44131 AU
max. Earth dist.	-1763 Mar 11 j 22:45		20.90966 AU	max. Earth dist.	-1755 Apr 14 j 12:37		20.44131 AU
retrograde	-1763 Jun 30 j 16:26	9°) 42′50	00 401 12	retrograde	-1755 Aug 03 j 17:08	12° Υ 52'23	00 251 12
opposition	-1763 Sep 15 j 18:50	7°) 42'39		opposition	-1755 Oct 18 j 11:53	10° Υ 50'54	
min. Earth dist.	-1763 Sep 15 j 06:37		18.88796 AU	min. Earth dist.	-1755 Oct 18 j 14:27		18.40641 AU
direct	-1763 Nov 29 j 10:57	5° ¥ 45'15		direct	-1754 Jan 01 j 02:49	8° Y 50'37	
	17/2 M 15:10:10	001/41112	00 441 0		1754 4 10:07.42	1200056120	00 201 22
conjunction	-1762 Mar 15 j 18:10	9°) (41'12		conjunction	-1754 Apr 19 j 07:43		0°-30'-33
minimum elong	-1762 Mar 15 j 18:10	9°) (41'12		minimum elong	-1754 Apr 19 j 07:43		0°30'34
max. Earth dist.	-1762 Mar 16 j 06:01		20.86485 AU	max. Earth dist.	-1754 Apr 19 j 02:46		20.37159 AU
retrograde	-1762 Jul 05 j 01:37	13° ¥ 46'30	00.401.10	retrograde	-1754 Aug 08 j 06:24	17° Y ′08′07	00.221.26
opposition	-1762 Sep 20 j 01:45	11°) (46'13		opposition	-1754 Oct 22 j 22:13	15° Y 06′28	
min. Earth dist.	-1762 Sep 19 j 16:22		18.84097 AU	min. Earth dist.	-1754 Oct 23 j 03:17		18.33649 AU
direct	-1762 Dec 03 j 15:29	9°) 48'34		direct	-1753 Jan 05 j 12:02	13°° y ′05'47	
conjunction	-1761 Mar 20 j 05:13	120 W 45122	00 42! 12	agnismation	-1753 Apr 24 j 01:08	17012111	00 27! 57
minimum elong	-1761 Mar 20 j 05:13			conjunction minimum elong	-1753 Apr 24 j 01:08		
max. Earth dist.	-1761 Mar 20 j 15:44			max. Earth dist.	-1753 Apr 24 j 01:08 -1753 Apr 23 j 18:26		
	-1761 Mai 20 j 13:44 -1761 Jul 09 j 13:58		20.81309 AU		-1753 Apr 25 j 18.26 -1753 Aug 12 j 23:29		20.30103 AU
retrograde			00 471 0	retrograde	-1753 Aug 12 j 23:29 -1753 Oct 27 j 08:55		09 201 20
opposition	-1761 Sep 24 j 08:52			opposition	,		
min. Earth dist.	-1761 Sep 24 j 00:23		18./8944 AU	min. Earth dist.	-1753 Oct 27 j 14:41		18.26650 AU
direct	-1761 Dec 07 j 23:27	13° \(\pi\) 33'14		direct	-1752 Jan 10 j 00:23	1/* 1/22/51	
conjunction	-1760 Mar 23 j 16:56	17°¥51'17	0°-42' 2	conjunction	-1752 Apr 27 j 19:32	210121140	0°-25' 11
minimum elong	-1760 Mar 23 j 16:56			minimum elong	-1752 Apr 27 j 19:32		
max. Earth dist.	-1760 Mar 24 j 00:22			max. Earth dist.	-1/52 Apr 2/ j 19:32 -1752 Apr 27 j 10:51		
retrograde	-1760 Mai 24 j 00:22 -1760 Jul 13 j 00:00		20.70109 AU	retrograde	-1752 Apr 27 j 10:31 -1752 Aug 16 j 14:37		20.23103 AU
•	-1760 Sep 27 j 16:31		00 45! 46	-	-1752 Aug 10 j 14.37 -1752 Oct 30 j 20:34		00 26! 10
opposition min. Earth dist.	-1760 Sep 27 j 11:02			opposition min. Earth dist.	-1752 Oct 30 j 20:34 -1752 Oct 31 j 04:49		
direct	-1760 Sep 27 j 11.02 -1760 Dec 11 j 05:20		18.73339 AU	direct	-1751 Jan 13 j 11:20		18.19003 AU
direct	-1700 Dec 11 J 03.20	1/ 1(3913		direct	-1/31 Jan 13 j 11.20	21 41 33	
conjunction	-1759 Mar 28 j 05:35	21°¥58'25	0°-40'-39	conjunction	-1751 May 02 j 14:49	25° Y ′52'31	0°-22'-15
minimum elong	-1759 Mar 28 j 05:35			minimum elong	-1751 May 02 j 14:49	25°Υ'52'31	
max. Earth dist.	-1759 Mar 28 j 11:23			max. Earth dist.	-1751 May 02 j 04:05		
retrograde	-1759 Jul 17 j 12:54		20.70302710	max. Earth dist.	-1751 Aug 05 j 03:33	0°8	20.10202110
opposition	-1759 Oct 02 j 00:14		0°-44'-7	retrograde	-1751 Aug 21 j 08:50	0° 8 06'53	
min. Earth dist.	-1759 Oct 02 j 00:14 -1759 Oct 01 j 19:42			- Un o grado	-1751 Aug 21 j 08:50 -1751 Sep 06 j 13:08	0 3 00 33	
direct	-1759 Dec 15 j 14:21		10.07520710	opposition	-1751 Sep 00 j 13:08 -1751 Nov 04 j 08:43	28° Y ′04'55	0°-22'-59
direct	1707 Dec 10 J 14.21	22 1 00 34		min. Earth dist.	-1751 Nov 04 j 08.45 -1751 Nov 04 j 17:49		18.12715 AU
conjunction	-1758 Apr 01 j 18:47	26° ₩ 06'58	0°-39'-2	direct	-1750 Jan 18 j 01:02	26° Υ 03'07	10.12/13 AU
minimum elong	-1758 Apr 01 j 18:47			direct	-1750 May 03 j 03:36	0° 8	
max. Earth dist.	-1758 Apr 01 j 18.47		20.64192 AU		1750 May 05 J 05.50	v O	
man, Darm Wist.	-1758 Apr 01 j 21.44 -1758 Jun 27 j 09:02	20 π 0/23 0° Υ	20.07172 AU	conjunction	-1750 May 07 j 11:08	0°×15'22	0°-19'-10
retrograde	-1758 Jul 21 j 23:50	0° Υ 15'14		minimum elong	-1750 May 07 j 11:08	0°815'23	0°19'10
renograde	-1/58 Jul 21 j 23:50 -1758 Aug 15 j 20:43			minimum elong max. Earth dist.	-1750 May 07 j 11:08 -1750 May 06 j 22:42	_	20.09264 AU
	-1730 Aug 13 J 20.43	つい 戊八		max. Darth UISt.	-1/30 iviay 00 J 22.42	0 013 32	20.03204 AU

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1750 in astronomical counting style is the year 1751 BCE in historical counting style. retrograde -1750 Aug 26 j 01:42 4°830'40 direct -1743 Feb 18 i 01:31 27°**8**29'26 -1750 Nov 08 j 21:51 2°**8**28'39 0°-19'-29 -1743 May 08 j 15:58 $\mathbb{I}^{\circ 0}$ opposition 2°827'24 18.05796 AU 1°**Ⅱ**48'56 19.62203 AU min. Earth dist. -1750 Nov 09 j 09:26 -1743 Jun 08 j 07:24 max. Earth dist. -1749 Jan 22 j 14:02 0°826'30 direct -1743 Jun 09 j 09:46 1°II52'58 0°05'21 conjunction -1749 May 12 j 08:20 4°**8**40'25 0°-15'-57 -1743 Jun 09 j 09:46 1°**I**I52'58 0°05'23 conjunction minimum elong -1749 May 12 j 08:20 4°840'25 0°15'56 -1743 Jun 09 j 03:13 1°**I**I51'59 minimum elong behind sun begin -1749 May 11 j 17:25 4°**8**38'12 20.02364 AU -1743 Jun 09 j 16:19 max. Earth dist. behind sun end 1°**I**I53'56 retrograde -1749 Aug 30 j 20:58 8°**8**56'38 retrograde -1743 Sep 26 j 20:51 6°**Ⅱ**13'52 -1743 Dec 09 j 15:59 opposition -1749 Nov 13 j 11:41 6°**8**54'33 0°-15'-50 opposition 4°**Ⅱ**11'12 0°07'53 min. Earth dist. -1749 Nov 14 j 00:23 6°**8**53'11 17.98901 AU min. Earth dist. -1743 Dec 10 j 13:53 4°**Д**08'49 17.59199 AU -1748 Jan 27 j 05:42 -1742 Feb 22 j 23:02 direct 4°**8**52'02 direct 2°**I**106'15 -1742 Jun 13 j 10:06 max. Earth dist. 6°**Ⅲ**27'12 19.56262 AU conjunction -1748 May 16 j 06:44 9°807'39 0°-12'-36 minimum elong -1748 May 16 j 06:44 9°**8**07'38 0°12'35 conjunction -1742 Jun 14 j 12:21 6°**Ⅲ**31'14 0°08'57 behind sun begin -1748 May 16 j 02:31 9°**8**07'02 minimum elong -1742 Jun 14 j 12:20 6°**Ⅲ**31'14 0°08'59 behind sun end -1748 May 16 j 10:57 9°**8**08'15 behind sun begin -1742 Jun 14 j 06:35 6°**Ⅲ**30′22 max. Earth dist. -1748 May 15 j 14:11 9°**8**05'10 19.95458 AU behind sun end -1742 Jun 14 j 18:06 6°**Ⅲ**32'06 retrograde -1748 Sep 03 j 15:10 13°824'44 retrograde -1742 Oct 01 j 19:01 10°**Ⅲ**52'45 opposition -1748 Nov 17 j 02:26 11°**8**22'34 0°-12'-4 opposition -1742 Dec 14 j 11:20 8°**II**50'01 0°11'55 min. Earth dist. -1748 Nov 17 j 17:34 11°**8**20'56 17.92005 AU min. Earth dist. -1742 Dec 15 j 09:58 8°**Д**47'33 17.53458 AU direct -1747 Jan 30 j 21:26 9°**8**19'40 direct -1741 Feb 27 i 21:16 6°**Ⅱ**44'43 max. Earth dist. -1747 May 20 j 10:27 13°**8**34'01 19.88579 AU max. Earth dist. -1741 Jun 18 j 11:00 11°**II**06'42 19.50735 AU conjunction -1747 May 21 j 05:53 13° \(\mathbf{3}36'56\) 0°-9'-9 conjunction -1741 Jun 19 і 15:15 11°**Д**11'03 0°12'31 -1747 May 21 j 05:52 13°**8**36'56 0°09'08 -1741 Jun 19 j 15:15 11°**Ⅲ**11'03 0°12'33 minimum elong minimum elong -1747 May 21 j 00:09 13°**8**36'06 -1741 Jun 19 j 11:00 11°**Ⅲ**10'25 behind sun begin behind sun begin -1747 May 21 j 11:35 13°**8**37'46 -1741 Jun 19 j 19:30 11°**Ⅲ**11'42 behind sun end behind sun end -1747 Jun 13 j 14:41 15°**8** -1741 Oct 06 j 17:10 15°**耳**33'10 retrograde -1747 Sep 08 j 10:57 17°854'53 -1741 Dec 19 j 07:33 13° **II** 30'23 0°15'52 retrograde opposition -1741 Dec 20 j 07:06 13°**Ц**27'48 17.48174 AU min. Earth dist. opposition -1747 Nov 22 j 10:16 15°**8**50'52 17.85150 AU -1740 Mar 03 j 20:01 11°**Ⅲ**24'44 min. Earth dist. direct -1747 Dec 12 j 16:13 15°R**8** -1746 Feb 04 j 15:09 13°**8**49'19 -1740 Jun 23 j 18:46 15°**II**52'23 0°16'02 direct conjunction -1740 Jun 23 j 18:46 15°**Ц**52'23 0°16'05 -1746 Mar 29 j 10:14 15°**8** minimum elong max. Earth dist. -1746 May 25 j 09:15 18°**8**05'07 19.81745 AU -1740 Jun 22 j 15:00 15°**Ⅱ**48'06 19.45688 AU max. Earth dist. -1740 Oct 10 j 16:54 20° **I**I15'01 retrograde conjunction -1746 May 26 j 05:46 18° **8**08'13 0°-5'-38 opposition -1740 Dec 23 j 04:29 18°**Д**12'14 0°19'45 -1746 May 26 j 05:45 18°**8**08'13 0°05'38 min. Earth dist. -1740 Dec 24 j 04:02 18°**Д**09'39 17.43388 AU minimum elong behind sun begin -1746 May 25 j 23:14 18°**8**07'15 direct -1739 Mar 08 j 19:58 16°**耳**06'19 behind sun end -1746 May 26 j 12:16 18°**8**09'10 retrograde -1746 Sep 13 j 06:36 22°826'58 -1739 Jun 28 j 22:32 20°**Ⅲ**35'11 0°19'27 conjunction -1746 Nov 26 j 10:26 20°**8**24'36 0°-4'-13 -1739 Jun 28 j 22:32 20°**Ⅲ**35'11 0°19'29 opposition minimum elong min. Earth dist. max. Earth dist. -1739 Jun 27 j 17:25 20° ДЗО'40 19.41175 AU -1745 Feb 09 j 09:28 18°\(20'54 -1739 Oct 15 j 16:17 24° **II** 58'18 direct retrograde -1745 May 30 j 07:04 22° \(\mathbf{3}\)37'50 19.75027 AU -1739 Dec 28 i 02:17 22° **II** 55'32 0°23'30 max. Earth dist. opposition -1739 Dec 29 j 02:39 22° **I** 52'52 17.39173 AU min. Earth dist. -1745 May 31 i 06:25 22°841'22 0°-2'-2 conjunction direct -1738 Mar 13 j 19:12 20°**Ⅱ**49'24 -1745 May 31 j 06:25 22°**8**41'22 minimum elong 0°02'01 max. Earth dist. -1738 Jul 02 j 22:08 25° **II** 14'58 19.37244 AU behind sun begin -1745 May 30 i 23:37 22°840'22 behind sun end -1745 May 31 i 13:12 22°842'22 -1738 Jul 04 i 02:36 25° II 19'24 0°22'46 conjunction retrograde -1745 Sep 18 j 02:49 27°800'53 minimum elong -1738 Jul 04 i 02:35 25° **1**19'24 0°22'48 -1745 Dec 01 j 03:25 24°\(\cup 58'25 \) 0°00'-11 -1738 Oct 20 j 17:43 29°**II**42'56 opposition retrograde min. Earth dist. -1737 Jan 02 j 00:44 27° **1**40'15 0°27'08 opposition asc. node -1745 Dec 19 j 21:14 24°810'44 min. Earth dist. -1737 Jan 03 j 00:37 27°**Ⅲ**37'38 17.35519 AU direct -1744 Feb 14 j 05:09 22°**8**54'16 direct -1737 Mar 18 j 20:42 25° **Ⅲ**33'58 -1737 Jul 07 j 23:15 max. Earth dist. -1744 Jun 03 j 08:03 27°**8**12'41 19.68485 AU 0°9 -1737 Jul 08 j 01:54 0°900'25 19.33868 AU max. Earth dist. -1744 Jun 04 j 07:58 27°**8**16'19 0°01'42 conjunction -1744 Jun 04 j 07:58 27°**8**16'19 0°01'43 -1737 Jul 09 j 07:04 0°**©**04'59 minimum elong conjunction 0°25'56 -1744 Jun 04 j 01:10 27°**8**15'19 -1737 Jul 09 j 07:04 behind sun begin minimum elong 0°904'58 0°25'59 behind sun end -1744 Jun 04 j 14:45 27°**8**17'19 retrograde -1737 Oct 25 j 17:30 4°9528'52 -1744 Jul 22 j 10:17 Π °0 opposition -1736 Jan 06 j 23:53 2°926'16 0°30'36 retrograde -1744 Sep 21 j 23:48 1°**Ⅲ**36'32 min. Earth dist. -1736 Jan 08 j 00:50 2°**5**23'32 17.32429 AU -1744 Nov 24 j 20:54 30°R**8** direct -1736 Mar 22 j 20:27 0°9519'52 -1744 Dec 04 j 21:21 29°\begin{align*} 29°\begin{align*} 33'59 & 0°03'51 \end{align*} max. Earth dist. -1736 Jul 12 j 06:59 4°5647'16 19.31046 AU opposition

min. Earth dist.

-1744 Dec 05 j 18:13 29°831'42 17.65310 AU

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1736 in astronomical counting style is the year 1737 BCE in historical counting style. -1736 Jul 13 j 11:48 4°951'47 0°28'57 minimum elong -1728 Aug 21 j 20:26 $13^{\circ}\Omega$ 22'31 $0^{\circ}44'29$ conjunction -1736 Jul 13 j 11:48 4°951'47 max. Earth dist. -1728 Aug 20 j 20:57 $13^{\circ}\Omega$ 18'47 19.26646 AU minimum elong 0°28'59 -1736 Oct 29 j 19:49 9°915'58 -1728 Sep 17 j 00:10 15°Ω retrograde -1735 Jan 10 j 23:49 -1728 Dec 07 j 01:00 17° Ω 45'40 7°9513'28 0°33'52 retrograde opposition min. Earth dist. -1735 Jan 11 j 23:58 7°510'49 17.29864 AU opposition direct -1735 Mar 28 j 00:03 5°906'59 min. Earth dist. max. Earth dist. -1727 Mar 07 j 19:49 15°R**Ω** -1735 Jul 17 j 11:45 9°935'07 19.28728 AU -1727 May 06 j 12:48 $13^{\circ} \Omega 37'03$ direct -1727 Jul 02 j 19:45 $15^{\circ}\Omega$ conjunction -1735 Jul 18 j 16:31 9°539'38 0°31'47 minimum elong -1735 Jul 18 j 16:31 9°939'38 0°31'49 retrograde -1735 Nov 03 j 19:32 14°904'01 conjunction -1727 Aug 26 j 22:17 $18^{\circ}\Omega$ 09'45 $0^{\circ}45'05$ -1734 Jan 16 j 00:31 12°501'36 0°36'54 -1727 Aug 26 j 22:17 18° **Ω**09'45 0°45'07 opposition minimum elong -1734 Jan 17 j 01:39 11°558'51 17.27807 AU -1727 Aug 26 j 01:50 18° **Ω**06'30 19.28633 AU min. Earth dist. max. Earth dist. direct -1734 Apr 02 j 01:29 9°955'03 retrograde -1727 Dec 12 j 01:16 22° Ω 32'26 opposition -1726 Feb 23 j 18:57 20°**Ω**30'27 0°50'30 conjunction -1734 Jul 23 j 21:19 14°\$28'17 0°34'23 min. Earth dist. -1726 Feb 24 j 13:00 20° **Ω**28'31 17.29905 AU minimum elong -1734 Jul 23 j 21:19 14°528'17 0°34'25 direct -1726 May 11 j 17:39 18°**Ω**24'02 max. Earth dist. -1734 Jul 22 j 16:32 14°523'45 19.26915 AU retrograde -1734 Nov 08 j 21:30 18°552'45 conjunction -1726 Aug 31 j 23:27 22° Ω 56'03 0°45'24 opposition -1733 Jan 21 j 01:30 16°\$50'25 0°39'42 minimum elong -1726 Aug 31 j 23:27 $22^{\circ}\Omega$ 56'03 0°45'24 min. Earth dist. -1733 Jan 22 j 01:34 16°547'47 17.26232 AU max. Earth dist. -1726 Aug 31 j 03:57 22° Ω 52'57 19.31275 AU -1726 Dec 17 j 00:44 27°**Ω**18'12 direct -1733 Apr 07 i 07:04 14°543'48 retrograde max. Earth dist. -1733 Jul 27 i 22:09 19°\$13'03 19.25571 AU opposition -1725 Feb 28 j 21:38 25° Ω 16'20 0°50'41 min. Earth dist. -1725 Mar 01 j 13:50 $25^{\circ}\Omega$ 14'36 17.32879 AU conjunction -1733 Jul 29 i 02:12 19°\$17'29 0°36'46 direct -1725 May 16 j 21:09 $23^{\circ}\Omega$ 10'07 -1733 Jul 29 j 02:12 19°517'29 0°36'47 max. Earth dist. -1725 Sep 05 j 07:36 $27^{\circ}\Omega 38'45$ 19.34576 AU minimum elong -1733 Nov 13 j 21:07 23°541'57 retrograde -1732 Jan 26 j 03:18 21°539'41 0°42'12 -1725 Sep $06 \text{ i } 00:03 \quad 27^{\circ} \Omega 41'21$ opposition conjunction 0°45'24 -1732 Jan 27 j 04:06 21°536'59 -1725 Sep 06 j 00:03 27°**Ω**41'21 min. Earth dist. 17.25133 AU minimum elong 0°45'26 -1725 Oct 14 j 07:03 -1732 Apr 11 j 10:15 19°533'01 0° m direct 2°m/02'55 -1732 Aug 01 j 02:28 24°502'29 19.24719 AU -1725 Dec 22 j 00:58 max. Earth dist. retrograde -1724 Mar 05 j 00:26 0° m 01'12 0° 50'30 opposition -1732 Aug 02 j 06:39 24°506'57 0°38'53 -1724 Mar 05 j 11:41 30°R**Ω** conjunction -1732 Aug 02 j 06:39 24°506'56 0°38'55 min. Earth dist. -1724 Mar 05 j 14:34 29° Ω 59'41 17.36476 AU minimum elong -1732 Nov 17 j 22:59 28°531'19 -1724 May 21 j 02:03 27° **Ω**55'18 retrograde direct -1731 Jan 30 j 05:20 26°\$29'07 0°44'25 -1724 Jul 31 j 11:52 opposition 0° m -1731 Jan 31 j 04:42 26°526'34 17.24527 AU min. Earth dist. direct -1731 Apr 16 j 17:12 24°522'25 conjunction -1724 Sep 09 j 23:38 2° m 25'35 0°45'06 max. Earth dist. -1731 Aug 06 j 08:28 28°552'14 19.24366 AU minimum elong -1724 Sep 09 j 23:38 2° m 25'35 0°45'07 max. Earth dist. -1724 Sep 09 j 08:40 2° m 23'13 19.38482 AU conjunction -1731 Aug 07 j 10:57 28°\$56'25 0°40'43 retrograde -1724 Dec 25 j 23:22 6° Mp 46'34 -1731 Aug 07 j 10:57 28°\$56'25 0°40'44 -1723 Mar 10 j 03:07 4° m/45'01 0°49'59 minimum elong opposition -1731 Aug 24 j 07:25 min. Earth dist. -1723 Mar 10 j 15:37 4° Mp 43'41 17.40670 AU 0 $^{\circ}\Omega$ retrograde -1731 Nov 22 j 22:40 3°**Ω**20′37 direct -1723 May 26 j 04:49 2°m/39'27 -1730 Feb 04 j 07:47 1°Ω18'27 0°46'19 opposition -1730 Feb 05 i 07:22 -1723 Sep 14 j 22:38 7° m 08'43 0°44'30 min. Earth dist. 1°Ω15'54 17.24438 AU conjunction -1730 Mar 08 i 18:09 30°RS minimum elong -1723 Sep 14 i 22:38 7° m 08'43 0°44'31 direct -1730 Apr 21 j 21:17 29°511'45 max. Earth dist. -1723 Sep 14 i 10:26 7° m 06'47 19.42950 AU -1730 Jun 04 i 00:26 $0^{\circ}\Omega$ retrograde -1723 Dec 30 j 22:51 11° m 29'01 opposition -1722 Mar 15 i 05:23 9° m 27'40 0°49'08 -1730 Aug 12 j 14:35 3°Ω45'40 0°42'16 min. Earth dist. -1722 Mar 15 j 15:30 9° m 26'35 17.45372 AU conjunction minimum elong -1730 Aug 12 j 14:35 3°Ω45'40 0°42'18 direct -1722 May 31 j 09:35 7° m 22'28 max. Earth dist. -1730 Aug 11 j 12:09 3°**Ω**41'28 19.24554 AU -1730 Nov 28 j 00:10 retrograde 8°**Ω**09'36 conjunction -1722 Sep 19 j 20:45 11° mp 50'35 0°43'36 opposition -1729 Feb 09 j 10:19 6°Ω07'28 0°47'53 minimum elong -1722 Sep 19 j 20:45 11° m 50'35 0°43'38 min. Earth dist. -1729 Feb 10 j 08:15 6°**Ω**05'05 17.24900 AU max. Earth dist. -1722 Sep 19 j 10:16 11° mp 48'56 19.47883 AU 4°**Ω**00'45 direct -1729 Apr 27 j 03:26 retrograde -1721 Jan 04 j 19:55 16° Mp 10'12 -1721 Mar 20 j 07:36 14° m 09'01 0°47'58 opposition -1729 Aug 17 j 17:55 8°**Ω**34'26 0°43'31 -1721 Mar 20 j 16:30 14° Mp 08'04 17.50517 AU conjunction min. Earth dist. -1729 Aug 17 j 17:55 8°**Ω**34'26 0°43'33 direct -1721 Jun 05 j 11:29 12° Mp 04'12 minimum elong 8°**Ω**30'38 19.25298 AU max. Earth dist. -1729 Aug 16 j 17:55 retrograde -1729 Dec 03 j 00:18 12°Ω58'00 conjunction -1721 Sep 24 j 18:01 16° m/31'05 0°42'25 opposition -1728 Feb 14 j 13:07 10°**Ω**55'55 0°49'06 minimum elong -1721 Sep 24 j 18:01 16° m 31'05 0°42'25 min. Earth dist. -1728 Feb 15 j 10:33 10°**Ω**53'36 17.25933 AU max. Earth dist. -1721 Sep 24 j 09:49 16° m 29'47 19.53222 AU direct -1728 May 01 j 08:01 8°**Ω**49'15 retrograde -1720 Jan 09 j 18:13 20° m 49'56 -1720 Mar 24 j 09:25 18° Mp 48'56 0°46'28 opposition -1728 Aug 21 j 20:26 13° **Ω**22'31 0°44'28 min. Earth dist. -1720 Mar 24 j 15:35 18° Mp 48'17 17.56016 AU conjunction

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•	omena of Uranus fraical year style is used: The		_	· //			age 13
direct	-1720 Jun 09 j 15:57	-	in astronomical co	direct	-1712 Jul 17 j 07:46		·.
ancor	1720 Juli 09 j 15.57	10 110 1151		direct	1712 Jul 17 J 07.10	22 - 37 30	
conjunction	-1720 Sep 28 j 14:29	21° mp 10'02	0°40'57	conjunction	-1712 Nov 02 j 23:09	27° ₽ 10'32	0°21'31
minimum elong	-1720 Sep 28 j 14:29	21° mp 10'02		minimum elong	-1712 Nov 02 j 23:09		
max. Earth dist.	-1720 Sep 28 j 08:22		19.58881 AU	max. Earth dist.	-1712 Nov 03 j 10:30		
retrograde	-1719 Jan 13 j 13:49	25° m/28'06			-1712 Dec 23 j 16:16	0°M	
opposition	-1719 Mar 29 j 10:58	23° m 27'15	0°44'41	retrograde	-1711 Feb 18 j 12:00	1°M21'17	
min. Earth dist.	-1719 Mar 29 j 16:06	23° m 26'43	17.61825 AU		-1711 Apr 19 j 20:40	30° Ŗ Ω	
direct	-1719 Jun 14 j 16:44	21°M 23'14		opposition	-1711 May 05 j 23:02	29° ≏ 21'10	0°22'11
				min. Earth dist.	-1711 May 05 j 11:32	29° ≏ 22'21	18.15046 AU
conjunction	-1719 Oct 03 j 09:55	25° Mp 47° 18	0°39'14	direct	-1711 Jul 22 j 01:54	27° ഫ 20'08	
minimum elong	-1719 Oct 03 j 09:55	25° m 47'18	0°39'14		-1711 Oct 12 j 22:07	0° M	
max. Earth dist.	-1719 Oct 03 j 05:37	25° Mp 46'37	19.64822 AU				
	-1718 Jan 05 j 14:48	0∘ 亚		conjunction	-1711 Nov 07 j 10:55	1°M31'03	0°18'26
retrograde	-1718 Jan 18 j 10:56	0° ჲ 04'31		minimum elong	-1711 Nov 07 j 10:55	1°M31'03	0°18'25
	-1718 Jan 31 j 10:46	30° ₽, M p		max. Earth dist.	-1711 Nov 07 j 23:21	1°M32'56	20.18718 AU
opposition	-1718 Apr 03 j 11:49	28° m 03'49	0°42'37	retrograde	-1710 Feb 23 j 03:57	5° M 40′56	
min. Earth dist.	-1718 Apr 03 j 14:03	28° Mp 03'34	17.67866 AU	opposition	-1710 May 10 j 18:03	3° M ₊40'57	
direct	-1718 Jun 19 j 19:20	26° Mp 00'10		min. Earth dist.	-1710 May 10 j 03:53		18.22372 AU
	-1718 Oct 02 j 02:50	0∘ ⊽		direct	-1710 Jul 26 j 20:36	1°M40'22	
		a - =		_			
conjunction	-1718 Oct 08 j 04:35	0° ჲ 22'43	0°37'16	conjunction	-1710 Nov 11 j 22:03	5°M49'41	0°15'16
minimum elong	-1718 Oct 08 j 04:35	0° ≏ 22'43	0°37'15	minimum elong	-1710 Nov 11 j 22:03	5°M49'41	0°15'15
max. Earth dist.	-1718 Oct 08 j 02:36		19.70962 AU	behind sun begin	-1710 Nov 11 j 19:41	5°M49'20	
retrograde	-1717 Jan 23 j 05:10	4° £ 39'03		behind sun end	-1710 Nov 12 j 00:25	5°M50'02	
opposition	-1717 Apr 08 j 12:10	2° ≏ 38'27		max. Earth dist.	-1710 Nov 12 j 13:31		20.26053 AU
min. Earth dist.	-1717 Apr 08 j 13:34		17.74099 AU	retrograde	-1709 Feb 27 j 17:06	9°M58'43	001.510.5
direct	-1717 Jun 24 j 18:29	0° ჲ 35'11		opposition	-1709 May 15 j 12:24	7°M58'53	0°15'07
	1717 0 + 10 : 20 11	40.0.56100	0025105	min. Earth dist.	-1709 May 14 j 21:02	8°M00'27	18.29703 AU
conjunction	-1717 Oct 12 j 22:11	4° £ 56'08	0°35'05	direct	-1709 Jul 31 j 13:23	5° ™ 58'46	
minimum elong	-1717 Oct 12 j 22:11	4° £ 56'08	0°35'05		1700 N 16:00 21	100 M 07121	0012102
max. Earth dist.	-1717 Oct 12 j 21:41		19.77293 AU	conjunction	-1709 Nov 16 j 08:21 -1709 Nov 16 j 08:20	10°M.06'31 10°M.06'31	0°12'03
retrograde	-1716 Jan 28 j 01:14	9° Ω 11'34 7° Ω 11'03	0°37'43	minimum elong	3		0°12'01
opposition min. Earth dist.	-1716 Apr 12 j 11:51 -1716 Apr 12 j 10:11		17.80503 AU	behind sun begin behind sun end	-1709 Nov 16 j 03:47 -1709 Nov 16 j 12:54	10°M05'50 10°M07'11	
	-1716 Apr 12 j 10.11 -1716 Jun 28 j 19:03	7 2 11 14 5° 2 08'08	17.80303 AU	max. Earth dist.	-1709 Nov 16 j 12.34 -1709 Nov 17 j 00:33		20 22272 ATT
direct	-1/16 Jun 28 j 19:03	3-220808		retrograde	-1709 Nov 17 j 00:33 -1708 Mar 03 j 07:35		20.333/3 AU
conjunction	-1716 Oct 16 j 14:43	9° ≏ 27'27	0°32'41	opposition	-1708 May 19 j 06:03		0°11'30
minimum elong	-1716 Oct 16 j 14:43	9° ₽ 27'27		min. Earth dist.	-1708 May 18 j 12:30		
max. Earth dist.	-1716 Oct 16 j 17:02		19.83778 AU	direct	-1708 Aug 04 j 05:39		16.50775 AC
retrograde	-1716 Get 16 j 17:02 -1715 Jan 31 j 18:02	13° £ 41'56	17.03770 AC	direct	-1700 Aug 04 J 05.57	10 1101323	
opposition	-1715 Apr 17 j 10:58	11° ⊆ 41'29	0°34'56	conjunction	-1708 Nov 19 j 18:04	14°M.21'37	0°08'46
min. Earth dist.	-1715 Apr 17 j 08:18	11° Ω 41'46		minimum elong	-1708 Nov 19 j 18:04		0°08'45
direct	-1715 Jul 03 j 16:29	9° £ 38'55	17.07070110	behind sun begin	-1708 Nov 19 j 12:23		0 00 15
	1710 vai 00 j 10.25	,		behind sun end	-1708 Nov 19 j 23:45		
conjunction	-1715 Oct 21 j 06:15	13° ≏ 56'32	0°30'07	max. Earth dist.	-1708 Nov 20 j 13:02		20.40596 AU
minimum elong	-1715 Oct 21 j 06:15				-1708 Nov 30 j 10:34		
max. Earth dist.	-1715 Oct 21 j 09:57		19.90435 AU	retrograde	-1707 Mar 07 j 20:10		
retrograde	-1714 Feb 05 j 13:01		-	opposition	-1707 May 23 j 22:58		0°07'50
opposition	-1714 Apr 22 j 08:57	16° ≏ 09'41	0°31'58	min. Earth dist.	-1707 May 23 j 04:21		
min. Earth dist.	-1714 Apr 22 j 03:12				-1707 Jul 04 j 16:11		
direct	-1714 Jul 08 j 15:00	14° ≙ 07'26		direct	-1707 Aug 08 j 21:02	14°M30'17	
	,				-1707 Sep 12 j 00:37		
conjunction	-1714 Oct 25 j 20:53	18° ≏ 23'23	0°27'23		- •		
minimum elong	-1714 Oct 25 j 20:53	18° ≏ 23'23	0°27'21	conjunction	-1707 Nov 24 j 03:07	18° ™ 35′02	0°05'29
max. Earth dist.	-1714 Oct 26 j 03:40	18° ≏ 24'25	19.97256 AU	minimum elong	-1707 Nov 24 j 03:06	18°M35'02	0°05'26
retrograde	-1713 Feb 10 j 04:15	22° ≏ 35'57		behind sun begin	-1707 Nov 23 j 20:47	18° ™ 34'07	
opposition	-1713 Apr 27 j 06:29	20° ≏ 35'38	0°28'50	behind sun end	-1707 Nov 24 j 09:24	18°M35'57	
min. Earth dist.	-1713 Apr 26 j 23:29	20° ≏ 36'22	18.00721 AU	max. Earth dist.	-1707 Nov 24 j 22:20	18° ™ 37'55	20.47644 AU
direct	-1713 Jul 13 j 10:51	18° ≏ 33'47		retrograde	-1706 Mar 12 j 08:53	22°M41'44	
				opposition	-1706 May 28 j 14:56	20°M42'21	0°04'09
conjunction	-1713 Oct 30 j 10:20	22° ≏ 48'01	0°24'31	min. Earth dist.	-1706 May 27 j 18:51		18.51080 AU
minimum elong	-1713 Oct 30 j 10:20	22° ≏ 48'01	0°24'30	direct	-1706 Aug 13 j 11:07	18°M43'30	
max. Earth dist.	-1713 Oct 30 j 18:29		20.04262 AU				
retrograde	-1712 Feb 14 j 21:49	26° ≏ 59'40		conjunction	-1706 Nov 28 j 11:44	22°M46'51	0°02'09
opposition	-1712 May 01 j 03:08	24° ≏ 59'26	0°25'34	minimum elong	-1706 Nov 28 j 11:44	22°M46'51	0°02'07
min. Earth dist.	-1712 Apr 30 j 16:59	25° ≏ 00′28	18.07813 AU	behind sun begin	-1706 Nov 28 j 05:12	22°M45'54	

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Attention astronom	nical year style is used: Tl	1706	in actronomical ac	unting style is the year	1707 DCE in historical	ounting style	
behind sun end	-1706 Nov 28 j 18:16	-	in astronomical co	direct	-1699 Sep 11 j 17:29		•
max. Earth dist.	-1706 Nov 29 j 09:15		20 54444 ATT	direct	-1099 Sep 11 j 17.29	1/ 🗶 30 34	
	•		20.34444 AU		1(00 D 2(: 00.00	210.72550	09 101 50
retrograde	-1705 Mar 16 j 20:46		10 57722 ATT	conjunction minimum elong	-1699 Dec 26 j 08:08		0°-19'-59
min. Earth dist.	-1705 Jun 01 j 09:22			Č	-1699 Dec 26 j 08:08		0°20'02
opposition	-1705 Jun 02 j 06:23		0°00'27	max. Earth dist.	-1699 Dec 27 j 10:48		20.92632 AU
desc. node	-1705 Jul 18 j 02:32			retrograde	-1698 Apr 14 j 16:16		00 221 40
direct	-1705 Aug 18 j 01:15	22*11655*05		opposition	-1698 Jul 01 j 21:02		0°-23'-40
	1705 D 02 : 10-20	260 m 57102	00 11 16	min. Earth dist.	-1698 Jun 30 j 18:39		18.94808 AU
conjunction	-1705 Dec 02 j 19:29	26°M57'03	0°-1'-16	direct	-1698 Sep 16 j 00:07	21° X '32'04	
minimum elong	-1705 Dec 02 j 19:30	26°M57'03	0°01'18		1600 D 20:12.00	250 726110	00 221 40
behind sun begin	-1705 Dec 02 j 12:59	26°M56'06		conjunction	-1698 Dec 30 j 13:00		0°-22'-48
behind sun end	-1705 Dec 03 j 02:02	26°M57'59	20.60025 AII	minimum elong	-1698 Dec 30 j 13:00		0°22'50
max. Earth dist.	-1705 Dec 03 j 17:00	27 IIC00 14 0° √	20.60935 AU	max. Earth dist.	-1698 Dec 31 j 17:23		20.90833 AU
rotro aro do	-1704 Jan 29 j 19:00 -1704 Mar 20 j 08:07	0 x . 1° x 02′20		retrograde min. Earth dist.	-1697 Apr 19 j 00:33 -1697 Jul 05 j 03:22		10 00046 ATT
retrograde	3				3		
	-1704 May 12 j 06:37	30°RM	00 21 11	opposition	-1697 Jul 06 j 06:43		0°-26'-42
opposition	-1704 Jun 05 j 21:08	29°M03'09		direct	-1697 Sep 20 j 08:26	23° X '32'18	
min. Earth dist.	-1704 Jun 04 j 23:04		18.64061 AU	:	1606 I 02: 17:25	200.725147	09 251 20
direct	-1704 Aug 21 j 13:33	27°M05'00		conjunction	-1696 Jan 03 j 17:25		0°-25'-29
	-1704 Nov 17 j 09:26	0° ∡ ¹		minimum elong	-1696 Jan 03 j 17:25	29° х 25'47	0°25'32
. ,.	1704 D 06:02.02	10 705120	00 41 25	max. Earth dist.	-1696 Jan 04 j 21:18		21.00705 AU
conjunction	-1704 Dec 06 j 03:02	1°×705'39	0°-4'-35	. 1	-1696 Jan 13 j 15:06	0°る	
minimum elong	-1704 Dec 06 j 03:01	1°× 7 05'39	0°04'37	retrograde	-1696 Apr 22 j 08:55	3°る27'03	00.201.26
behind sun begin	-1704 Dec 05 j 20:37	1°×704'44		opposition	-1696 Jul 09 j 16:00	1°る28'05	
behind sun end	-1704 Dec 06 j 09:25	1°×706'34	20 (5054 177	min. Earth dist.	-1696 Jul 08 j 12:55		19.02548 AU
max. Earth dist.	-1704 Dec 07 j 02:31		20.67074 AU	T' .	-1696 Aug 20 j 08:39	30°R ✓	
retrograde	-1703 Mar 24 j 18:40	5°× 7 10'16	10 70012 411	direct	-1696 Sep 23 j 13:25	29° ₹ 31'45	
min. Earth dist.	-1703 Jun 09 j 11:59		18.70013 AU		-1696 Oct 26 j 23:10	0°₹	
opposition	-1703 Jun 10 j 10:54		0°-6'-49		1605 1 06:00 04	22 42 5	00.001.0
direct	-1703 Aug 26 j 02:10	1° ∡ 13'17		conjunction	-1695 Jan 06 j 22:04	3°₹24'35	
	1702 D 10:00 47	50 7 10140	00.71.40	minimum elong	-1695 Jan 06 j 22:04	3°る24'35	
conjunction	-1703 Dec 10 j 09:47	5° 🖈 12'40	0°-7'-48	max. Earth dist.	-1695 Jan 08 j 03:18		21.04211 AU
minimum elong	-1703 Dec 10 j 09:47	5°×12'40	0°07'50	retrograde	-1695 Apr 26 j 17:11	7°る25'35	10.05045 444
behind sun begin	-1703 Dec 10 j 03:53	5° 🖈 11'49		min. Earth dist.	-1695 Jul 12 j 20:52		19.05847 AU
behind sun end	-1703 Dec 10 j 15:41	5°×13'30	20 72044 444	opposition	-1695 Jul 14 j 00:30	5°る26'41	0°-32'-21
max. Earth dist.	-1703 Dec 11 j 09:00		20.72844 AU	direct	-1695 Sep 27 j 20:56	3° る 30'32	
retrograde	-1702 Mar 29 j 04:53	9°×16'39	10 55 600 177		1.004.7 11:00.00	50700 40	00 201 20
min. Earth dist.	-1702 Jun 14 j 00:27		18.75609 AU	conjunction	-1694 Jan 11 j 02:28	7°る22'48	0°-30'-28
opposition	-1702 Jun 15 j 00:01	7°×17'32	0°-10'-22	minimum elong	-1694 Jan 11 j 02:28	7°る22'48	
direct	-1702 Aug 30 j 12:42	5° ⊀ 19'54		max. Earth dist.	-1694 Jan 12 j 06:42		21.07295 AU
	1700 D 14:16.00	00.71006	00 101 50	retrograde	-1694 May 01 j 01:27	11°る23'38	10.00712.411
conjunction	-1702 Dec 14 j 16:02	9°×18'06	0°-10'-58	min. Earth dist.	-1694 Jul 17 j 06:00		19.08713 AU
minimum elong	-1702 Dec 14 j 16:02	9°×18'06	0°11'02	opposition	-1694 Jul 18 j 08:51	9°₹24'46	0°-34'-57
behind sun begin	-1702 Dec 14 j 11:04	9°×717'23		direct	-1694 Oct 02 j 01:19	7° る 28'47	
behind sun end	-1702 Dec 14 j 20:59	9°×18'48	20 70255 411		1602 1 15:06 57	110720026	00 221 44
max. Earth dist.	-1702 Dec 15 j 17:15		20.78255 AU	conjunction	-1693 Jan 15 j 06:57		
retrograde	-1701 Apr 02 j 13:52	13°×21'28	10.00051 ATT	minimum elong	-1693 Jan 15 j 06:57		
min. Earth dist.	-1701 Jun 18 j 11:44	11° × °24'30' 11° × °22'22	18.80851 AU	max. Earth dist.	-1693 Jan 16 j 12:07		21.09914 AU
opposition	-1701 Jun 19 j 12:21		013-31	retrograde	-1693 May 05 j 09:36		
direct					1602 1-1 22:16.45	120-222120	
	-1701 Sep 03 j 23:32	9° ∡ 124'59		opposition	-1693 Jul 22 j 16:45		
. ,.			00 141 4	min. Earth dist.	-1693 Jul 21 j 13:37	13° පි 25'11	
conjunction	-1701 Dec 18 j 21:43	13° ∡ ¹22'02			3	13° පි 25'11	
minimum elong	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43	13° х 22′02 13° х 22′02		min. Earth dist. direct	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03	13°පි25'11 11°පි26'37	19.11073 AU
minimum elong behind sun begin	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22	13° х 22'02 13° х 22'02 13° х 21'34		min. Earth dist. direct	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31	13°පි25'11 11°පි26'37 15°පි18'03	19.11073 AU 0°-34'-51
minimum elong behind sun begin behind sun end	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05	13° × 22'02 13° × 22'02 13° × 21'34 13° × 22'31	0°14'07	min. Earth dist. direct conjunction minimum elong	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 19 j 11:31	13°525'11 11°526'37 15°518'03 15°518'03	19.11073 AU 0°-34'-51 0°34'54
minimum elong behind sun begin behind sun end max. Earth dist.	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42		min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13	13° ට 25'11 11° ට 26'37 15° ට 18'03 15° ට 18'03 15° ට 22'00	19.11073 AU 0°-34'-51 0°34'54
minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42 17° ₹24'53	0°14'07 20.83342 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52	13°ට 25'11 11°ට 26'37 15°ට 18'03 15°ට 18'03 15°ට 22'00 19°ට 18'41	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42 17° ₹24'53 15° ₹25'46	0°14'07 20.83342 AU 0°-17'-14	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31	13°පි25'11 11°පි26'37 15°පි18'03 15°පි22'00 19°පි18'41 17°පි22'25	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist.	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51	13° \$\times^2 22'02 13° \$\times^2 22'02 13° \$\times^2 21'34 13° \$\times^2 22'31 13° \$\times^2 25'42 17° \$\times^2 24'53 15° \$\times^2 25'46 15° \$\times^2 28'16	0°14'07 20.83342 AU 0°-17'-14	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21	13° පි25'11 11° පි26'37 15° පි18'03 15° පි18'03 15° පි22'00 19° පි18'41 17° පි22'25 17° පි19'51	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59	13° \$\times^2 22'02 13° \$\times^2 22'02 13° \$\times^2 21'34 13° \$\times^2 22'31 13° \$\times^2 25'42 17° \$\times^2 24'53 15° \$\times^2 25'46 15° \$\times^2 28'16	0°14'07 20.83342 AU 0°-17'-14	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31	13° පි25'11 11° පි26'37 15° පි18'03 15° පි18'03 15° පි22'00 19° පි18'41 17° පි22'25 17° පි19'51	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Sep 07 j 08:16	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42 17° ₹24'53 15° ₹25'46 15° ₹28'16 13° ₹28'35	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 Jan 20 j 15:13 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22	13°පි25'11 11°පි26'37 15°පි18'03 15°පි22'00 19°පි18'41 17°පි22'25 17°පි19'51 15°පි24'04	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Sep 07 j 08:16	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42 17° ₹24'53 15° ₹28'16 13° ₹28'35	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU 0°-17'-5	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 Jan 20 j 15:13 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22 -1691 Jan 22 j 16:24	13°පි25'11 11°පි26'37 15°පි18'03 15°පි22'00 19°පි18'41 17°පි22'25 17°පි19'51 15°පි24'04	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Sep 07 j 08:16 -1700 Dec 22 j 03:10 -1700 Dec 22 j 03:09	13° ₹22'02 13° ₹22'02 13° ₹21'34 13° ₹22'31 13° ₹25'42 17° ₹24'53 15° ₹28'16 13° ₹28'35 17° ₹24'37 17° ₹24'37	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU 0°-17'-5 0°17'08	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22 -1691 Jan 22 j 16:24 -1691 Jan 22 j 16:24	13°පි25'11 11°පි26'37 15°පි18'03 15°පි22'00 19°පි18'41 17°පි22'25 17°පි19'51 15°පි24'04 19°පි15'13 19°පි15'13	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37 0°-36'-48 0°36'51
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Dec 22 j 03:10 -1700 Dec 22 j 03:09 -1700 Dec 23 j 06:10	13° \$\times^2 22'02 13° \$\times^2 22'02 13° \$\times^2 21'34 13° \$\times^2 22'31 13° \$\times^2 25'42 17° \$\times^2 25'46 15° \$\times^2 28'35 17° \$\times^2 24'37 17° \$\times^2 24'37 17° \$\times^2 28'32	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU 0°-17'-5 0°17'08	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22 -1691 Jan 22 j 16:24 -1691 Jan 22 j 16:24 -1691 Jan 23 j 20:26	13°る25'11 11°る26'37 15°る18'03 15°る18'03 15°る22'00 19°る18'41 17°る22'25 17°る19'51 15°る24'04 19°る15'13 19°る15'13 19°る19'13	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37 0°-36'-48 0°36'51
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Dec 22 j 03:10 -1700 Dec 22 j 03:09 -1700 Dec 23 j 06:10 -1699 Apr 10 j 07:38	13° \$\times^2 22'02 13° \$\times^2 22'02 13° \$\times^2 22'31 13° \$\times^2 25'42 17° \$\times^2 24'53 15° \$\times^2 28'16 13° \$\times^2 28'35 17° \$\times^2 24'37 17° \$\times^2 24'37 17° \$\times^2 28'32 21° \$\times^2 26'57	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU 0°-17'-5 0°17'08 20.88136 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22 -1691 Jan 22 j 16:24 -1691 Jan 23 j 20:26 -1691 May 13 j 01:47	13°る25'11 11°る26'37 15°る18'03 15°る18'03 15°る22'00 19°る18'41 17°る22'25 17°る19'51 15°る24'04 19°る15'13 19°る15'13 19°る15'13 23°る15'48	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37 0°-36'-48 0°36'51 21.13525 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1701 Dec 18 j 21:43 -1701 Dec 18 j 21:43 -1701 Dec 18 j 18:22 -1701 Dec 19 j 01:05 -1701 Dec 19 j 22:48 -1700 Apr 05 j 23:21 -1700 Jun 22 j 23:59 -1700 Jun 21 j 22:51 -1700 Dec 22 j 03:10 -1700 Dec 22 j 03:09 -1700 Dec 23 j 06:10	13° \$\times^2 22'02 13° \$\times^2 22'32 13° \$\times^2 22'31 13° \$\times^2 25'42 17° \$\times^2 24'53 15° \$\times^2 28'35 17° \$\times^2 24'37	0°14'07 20.83342 AU 0°-17'-14 18.85803 AU 0°-17'-5 0°17'08 20.88136 AU 18.90449 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-1693 Jul 21 j 13:37 -1693 Oct 06 j 08:03 -1692 Jan 19 j 11:31 -1692 Jan 20 j 15:13 -1692 Jan 20 j 15:13 -1692 May 08 j 17:52 -1692 Jul 24 j 22:31 -1692 Jul 26 j 00:21 -1692 Oct 09 j 12:22 -1691 Jan 22 j 16:24 -1691 Jan 22 j 16:24 -1691 Jan 23 j 20:26	13°る25'11 11°る26'37 15°る18'03 15°る22'00 19°る18'41 17°る22'25 17°る19'51 15°る24'04 19°る15'13 19°る15'13 19°る15'13 23°る15'48 21°る19'31	19.11073 AU 0°-34'-51 0°34'54 21.12005 AU 19.12892 AU 0°-39'-37 0°-36'-48 0°36'51 21.13525 AU 19.14102 AU

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, page 15 Attention, astronomical year style is used: The year -1691 in astronomical counting style is the year 1692 BCE in historical counting style.

Attention, astronomic	cal year style is used: Th	ne year -1691	in astronomical cou	nting style is the year	1692 BCE in historical c	counting style	
direct	-1691 Oct 13 j 18:20	19° る 21'12		retrograde	-1683 Jun 14 j 17:19	24° ≈ 52'10	
				opposition	-1683 Aug 31 j 08:40	22° ≈ 52'28	0°-50'-18
conjunction	-1690 Jan 26 j 21:12	23° る 12'07	0°-38'-34	min. Earth dist.	-1683 Aug 30 j 14:32	22° ≈ 54'18	19.04962 AU
minimum elong	-1690 Jan 26 j 21:12	23° る 12'07	0°38'37	direct	-1683 Nov 14 j 05:36	20° ≈ 55'55	
max. Earth dist.	-1690 Jan 27 j 23:20	23° る 15'51	21.14428 AU				
retrograde	-1690 May 17 j 09:26	27° る 12'43		conjunction	-1682 Feb 27 j 20:32	24° ≈ 48'32	0°-45'-34
opposition	-1690 Aug 03 j 14:30	25° る 13'47	0°-43'-31	minimum elong	-1682 Feb 27 j 20:32	24° ≈ 48'32	0°45'37
min. Earth dist.	-1690 Aug 02 j 14:17	25° ප 16'12	19.14706 AU	max. Earth dist.	-1682 Feb 28 j 14:59	24° ≈ 51′09	21.03462 AU
direct	-1690 Oct 17 j 22:34	23° る 18'01		retrograde	-1682 Jun 19 j 01:36	28° ≈ 51'17	
				opposition	-1682 Sep 04 j 14:41	26° ≈ 51′29	0°-50'-21
conjunction	-1689 Jan 31 j 02:16	27° る 08'48	0°-40'-9	min. Earth dist.	-1682 Sep 03 j 22:41	26° ≈ 53'07	19.01930 AU
minimum elong	-1689 Jan 31 j 02:16	27° る 08'48	0°40'12	direct	-1682 Nov 18 j 08:36	24° ≈ 54'48	
max. Earth dist.	-1689 Feb 01 j 04:37	27° る 12'33	21.14738 AU				
	-1689 Mar 27 j 19:43	0° ≈		conjunction	-1681 Mar 04 j 04:35	28° ≈ 48′06	0°-45'-30
retrograde	-1689 May 21 j 17:18	1° ≈ 09'26		minimum elong	-1681 Mar 04 j 04:36	28° ≈ 48′06	0°45'32
	-1689 Jul 17 j 13:51	30°Ŗる		max. Earth dist.	-1681 Mar 04 j 22:36	28° ≈ 50'40	21.00238 AU
opposition	-1689 Aug 07 j 21:03	29° る 10'24	0°-45'-9		-1681 Mar 25 j 12:53	0° ∀	
min. Earth dist.	-1689 Aug 06 j 20:57	29° る 12'49	19.14719 AU	retrograde	-1681 Jun 23 j 11:25	2° 升 51′23	
direct	-1689 Oct 22 j 04:01	27° る 14'35		opposition	-1681 Sep 08 j 20:39	0°) 51′33	0°-50'-9
	-1688 Jan 15 j 22:30	0°≈		min. Earth dist.	-1681 Sep 08 j 05:12	0°) 53′07	18.98492 AU
					-1681 Sep 30 j 15:22	30°R≈	
conjunction	-1688 Feb 04 j 07:18	1°≈05'18	0°-41'-33	direct	-1681 Nov 22 j 14:33	28° ≈ 54'43	
minimum elong	-1688 Feb 04 j 07:18	1° ≈ 05'18	0°41'35		-1680 Jan 12 j 19:19	0° ∀	
max. Earth dist.	-1688 Feb 05 j 07:47	1° ≈ 08'47	21.14480 AU		•		
retrograde	-1688 May 25 j 00:21	5° ≈ 06'03		conjunction	-1680 Mar 07 j 13:11	2°){ 48'46	0°-45'-12
min. Earth dist.	-1688 Aug 10 j 05:07		19.14200 AU	minimum elong	-1680 Mar 07 j 13:11	2°) 48'46	
opposition	-1688 Aug 11 j 03:29	3° ≈ 06'53	0°-46'-35	max. Earth dist.	-1680 Mar 08 j 04:32		20.96591 AU
direct	-1688 Oct 25 j 07:50	1°≈10'57	0 .0 55	retrograde	-1680 Jun 26 j 20:49	6°) 52'41	20.50051110
	1000 0 01 2 5 j 07.50	1		opposition	-1680 Sep 12 j 03:02	4°) 52'45	0°-49'-42
conjunction	-1687 Feb 07 j 12:47	5° ≈ 01'44	0°-42'-44	min. Earth dist.	-1680 Sep 11 j 14:10		18.94621 AU
minimum elong	-1687 Feb 07 j 12:47	5°≈01'44		direct	-1680 Nov 25 j 18:36	2°) 55'44	10.94021 710
max. Earth dist.	-1687 Feb 08 j 13:27		21.13708 AU	direct	-1000 NOV 25 J 10.50	2 /(33 नन	
retrograde	-1687 May 29 j 08:43	9°≈02'38	21.13700 AC	conjunction	-1679 Mar 11 j 22:44	6°) 50'40	0°-44'-41
min. Earth dist.	-1687 Aug 14 j 11:08		19.13183 AU	minimum elong	-1679 Mar 11 j 22:44	6°) 50'40	
opposition	-1687 Aug 15 j 09:21	7°≈03'34 7°≈03'20		max. Earth dist.	-1679 Mar 12 j 13:07		20.92491 AU
direct	-1687 Oct 29 j 13:00	5°≈07'18	0 -4/ -4/	retrograde	-1679 Jul 01 j 07:07		20.92491 AU
direct	-1087 Oct 29 j 15.00	3 ~ 07 16		opposition	-1679 Sep 16 j 09:24	8° \(\) 55'11	0° 40' 1
agniumation	-1686 Feb 11 j 18:18	8° ≈ 58'14	09 421 42		-1679 Sep 15 j 21:24		18.90273 AU
conjunction minimum elong	-1686 Feb 11 j 18:18			min. Earth dist.	-1679 Sep 13 j 21.24 -1679 Nov 30 j 00:57		18.90273 AU
_	-	8°≈58'14		direct	-10/9 NOV 30 J 00:5/	0°π3/30	
max. Earth dist.	-1686 Feb 12 j 17:04		21.12467 AU		1670 M 16:00 40	10°) 53'47	00 421 56
retrograde	-1686 Jun 02 j 15:27	12°≈59'22	00 40! 45	conjunction	,		
opposition	-1686 Aug 19 j 15:22	10°≈59'56	0°-48'-45	minimum elong	-1678 Mar 16 j 08:49	10°) € 53'47	0°43'58
min. Earth dist.	-1686 Aug 18 j 18:54		19.11731 AU	max. Earth dist.	-1678 Mar 16 j 20:11		20.87903 AU
direct	-1686 Nov 02 j 16:00	9° ≈ 03'46		retrograde	-1678 Jul 05 j 17:00		00 401 4
				opposition	-1678 Sep 20 j 16:22		
conjunction	-1685 Feb 16 j 00:10		0°-44'-30	min. Earth dist.	-1678 Sep 20 j 07:11		18.85443 AU
minimum elong	-1685 Feb 16 j 00:10		0°44'33	direct	-1678 Dec 04 j 06:23	11° 米 01′20	
max. Earth dist.	-1685 Feb 16 j 23:07		21.10807 AU				
	-1685 Mar 26 j 12:50			conjunction	-1677 Mar 20 j 19:42		
retrograde	-1685 Jun 07 j 00:38			minimum elong	-1677 Mar 20 j 19:42		0°42'58
	-1685 Aug 22 j 14:11			max. Earth dist.	-1677 Mar 21 j 05:51		20.82836 AU
opposition	-1685 Aug 23 j 21:09		0°-49'-30	retrograde	3	19°) €04'04	
min. Earth dist.	-1685 Aug 23 j 00:47		19.09862 AU	opposition	-1677 Sep 24 j 23:28		0°-46'-52
direct	-1685 Nov 06 j 21:19	13° ≈ 00'35		min. Earth dist.	-1677 Sep 24 j 15:14		18.80126 AU
	-1684 Jan 17 j 00:58	15° ≈		direct	-1677 Dec 08 j 13:51	15°) €05'54	
	1604E1 20:065	1.604 - 50100	00.451.4		1/7/14 04:07:0	1001/02/10	00 411 45
conjunction	-1684 Feb 20 j 06:27	16°≈52'09	0°-45'-4	conjunction	-1676 Mar 24 j 07:20		0°-41'-45
minimum elong	-1684 Feb 20 j 06:27	16°≈52'09	0°45'06	minimum elong	-1676 Mar 24 j 07:20		0°41'46
max. Earth dist.	-1684 Feb 21 j 03:20		21.08744 AU	max. Earth dist.	-1676 Mar 24 j 14:22		20.77298 AU
retrograde	-1684 Jun 10 j 07:49	20°≈53'57		retrograde	-1676 Jul 13 j 14:24		
min. Earth dist.	-1684 Aug 26 j 08:31	18° ≈ 56′11	19.07609 AU	opposition	-1676 Sep 28 j 06:54		0°-45'-25
opposition	-1684 Aug 27 j 02:55	18° ≈ 54'19	0°-50'-1	min. Earth dist.	-1676 Sep 28 j 01:37		18.74375 AU
direct	-1684 Nov 09 j 23:53	16° ≈ 57'54		direct	-1676 Dec 11 j 20:13	19°) 1 1′40	
	1602 E 1 - 02 : 12 C :	200: - 40:5	00.451.26		1675 14 20:10:10	2201/10115	00 40! 10
conjunction	-1683 Feb 23 j 13:24		0°-45'-26	conjunction	-1675 Mar 28 j 19:48		
minimum elong	-1683 Feb 23 j 13:24		0°45'28	minimum elong	-1675 Mar 28 j 19:48		
max. Earth dist.	-1683 Feb 24 j 10:06	20° ≈ 52'53	21.06300 AU	max. Earth dist.	-1675 Mar 29 j 01:31	23° 米 11'31	20.71362 AU

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1675 in astronomical counting style is the year 1676 BCE in historical counting style. -1675 Jul 18 j 02:40 27° **)** 18'00 retrograde -1667 Jun 27 i 10:16 0°8 -1675 Oct 02 j 14:34 25° **)** € 17'17 0°-43'-44 -1667 Aug 21 j 22:02 1°816'09 opposition retrograde min. Earth dist. -1675 Oct 02 j 10:10 25° H 17'45 18.68254 AU -1667 Oct 17 j 16:17 30°RΥ -1675 Dec 16 j 04:54 23° **米** 18'41 -1667 Nov 04 j 22:26 29°**Υ**14'16 0°-22'-22 direct opposition min. Earth dist. -1667 Nov 05 j 07:33 29°**Υ**13'17 18.13647 AU -1674 Apr 02 j 08:40 27° ¥ 18'52 0°-38'-41 -1666 Jan 18 j 15:22 27°Υ12'33 conjunction direct -1666 Apr 13 j 19:49 -1674 Apr 02 j 08:40 27°**升** 18'52 0°38'42 minimum elong 0°B -1674 Apr 02 j 11:35 27°**)** 19'18 20.65085 AU -1666 May 07 j 11:41 max. Earth dist. max. Earth dist. 1°**8**22'48 20.10148 AU -1674 May 22 j 19:38 $0^{\circ}\Upsilon$ 1°**Y**26'57 -1674 Jul 22 j 13:29 retrograde conjunction -1666 May 08 j 00:24 1°**8**24'41 0°-18'-36 -1674 Sep 23 j 05:04 30°R € minimum elong -1666 May 08 j 00:24 1°**8**24'41 0°18'36 -1674 Oct 06 j 22:48 29° **★**26'01 0°-41'-49 -1666 Aug 26 j 14:42 5°**8**39'54 opposition retrograde -1674 Oct 06 j 21:09 29° **X** 26'12 18.61843 AU -1666 Nov 09 j 11:38 3°**8**37'57 min. Earth dist. opposition 0°-18'-51 direct -1674 Dec 20 j 11:58 27°\ 26'59 min. Earth dist. -1666 Nov 09 j 23:26 3°836'41 18.06614 AU -1673 Mar 11 j 22:17 $0^{\circ}\Upsilon$ direct -1665 Jan 23 j 03:46 1°**8**35'52 conjunction -1673 Apr 06 j 22:37 1°Y28'26 0°-36'-50 conjunction -1665 May 12 j 21:43 5°**8**49'41 0°-15'-22 minimum elong -1673 Apr 06 j 22:37 1°Y28'26 0°36'51 minimum elong -1665 May 12 j 21:44 5°**8**49'41 0°15'21 max. Earth dist. -1673 Apr 07 j 00:16 1°Υ28'41 20.58564 AU behind sun begin -1665 May 12 j 20:14 5°849'28 retrograde -1673 Jul 27 j 03:10 5°Y37'18 behind sun end -1665 May 12 j 23:14 5°849'54 opposition -1673 Oct 11 j 07:10 3°**Υ**36'10 0°-39'-40 max. Earth dist. -1665 May 12 j 06:31 5°**8**47'26 20.03102 AU min. Earth dist. -1673 Oct 11 i 06:17 3°**Y**36'15 18.55213 AU retrograde -1665 Aug 31 j 10:38 10°**8**05'51 direct -1673 Dec 24 j 21:42 1°Y36'43 opposition -1665 Nov 14 j 01:22 8°**8**03'48 0°-15'-11 min. Earth dist. -1665 Nov 14 i 14:15 8°**と**02'25 17.99549 AU conjunction -1672 Apr 10 j 13:18 5°**Υ**'39'30 0°-34'-46 direct -1664 Jan 27 j 20:00 6°801'20 -1672 Apr 10 j 13:18 5°Υ39'30 0°34'47 minimum elong max. Earth dist. -1672 Apr 10 j 12:15 5°**Υ**39'21 20.51844 AU -1664 May 16 j 20:05 10°**8**16'51 0°-12'00 conjunction -1672 Jul 30 j 15:15 9°Y49'11 -1664 May 16 j 20:05 10°**8**16'51 retrograde minimum elong 0°12'00 -1672 Oct 14 j 16:16 7°**Y**'47'51 0°-37'-17 -1664 May 16 j 15:32 10°**8**16'11 opposition behind sun begin 7°**Υ**47'39 18.48424 AU -1664 May 17 j 00:38 10°**8**17'31 -1672 Oct 14 j 18:04 min. Earth dist. behind sun end -1664 May 16 j 02:59 10°814'18 19.96010 AU -1672 Dec 28 j 05:51 5°**℃**47'59 direct max. Earth dist. -1664 Sep 04 j 04:32 14°833'53 retrograde -1671 Apr 15 j 04:51 9°**Υ**52'10 0°-32'-31 -1664 Nov 17 j 16:11 12°**8**31'46 0°-11'-23 conjunction opposition -1671 Apr 15 j 04:51 9°**Υ**'52'10 0°32'32 min. Earth dist. minimum elong -1671 Apr 15 j 02:23 9°**Υ**51'49 20.45001 AU -1663 Jan 31 j 10:32 10°828'54 max. Earth dist. direct -1671 Aug 04 j 06:11 14°**Υ**02'43 retrograde -1671 Oct 19 j 01:42 12° Υ 01'12 0°-34'-42 -1663 May 21 j 19:00 14°**8**46'03 0°-8'-33 opposition conjunction min. Earth dist. -1671 Oct 19 j 04:06 12°**Υ**00'57 18.41533 AU minimum elong -1663 May 21 j 19:00 14°**8**46'03 0°08'33 direct -1670 Jan 01 j 16:43 10°**Y**00'56 behind sun begin -1663 May 21 j 13:07 14°**8**45'12 behind sun end -1663 May 22 j 00:53 14°**8**46'55 conjunction -1670 Apr 19 j 21:12 14°**Υ**′06'36 0°-30'-5 max. Earth dist. -1663 May 20 j 23:15 14°**8**43'06 19.88931 AU -1670 Apr 19 j 21:12 14°**Υ**06'36 0°30'05 -1663 May 25 j 15:36 15°**8** minimum elong max. Earth dist. -1670 Apr 19 j 16:20 14°**Υ**05'53 20.38076 AU retrograde -1663 Sep 09 j 01:08 19°**8**03'58 retrograde -1670 Aug 08 j 19:50 18°**Υ**18'02 -1663 Nov 22 j 07:36 17°**8**01'43 0°-7'-30 opposition -1670 Oct 23 j 11:56 16° **Y** 16'23 0°-31'-54 min. Earth dist. opposition -1670 Oct 23 j 16:53 16°Υ 15'52 18.34591 AU -1662 Jan 28 j 13:21 15°R₩ min. Earth dist. -1669 Jan 06 j 02:05 14°**Υ**15'44 -1662 Feb 05 i 05:06 14°858'25 direct direct -1662 Feb 12 j 21:47 15°8 -1669 Apr 24 i 14:31 18°**Υ**22'56 0°-27'-28 conjunction conjunction minimum elong $-1669 \text{ Apr } 24 \text{ i } 14:31 \quad 18^{\circ} \Upsilon^{2} 2^{\circ} 56 \quad 0^{\circ} 27' 28$ -1662 May 26 j 18:53 19°**8**17'13 0°-5'-2 max. Earth dist. $-1669 \text{ Apr } 24 \text{ j } 08:03 \quad 18^{\circ} \Upsilon 21'59 \quad 20.31129 \text{ AU}$ -1662 May 26 j 18:54 19°**8**17'13 0°05'01 minimum elong retrograde -1669 Aug 13 j 12:24 22°**Υ**35'18 behind sun begin -1662 May 26 j 12:18 19°**8**16'15 -1669 Oct 27 j 22:41 20°**Υ**'33'33 0°-28'-54 behind sun end -1662 May 27 j 01:30 19°**8**18'12 opposition -1669 Oct 28 j 04:18 20°**Y**32'57 18.27626 AU min. Earth dist. max. Earth dist. -1662 May 25 j 21:59 19°8 14'04 19.81912 AU direct -1668 Jan 10 j 14:28 18°**Y**32'32 retrograde -1662 Sep 13 j 19:36 23°835'56 opposition -1668 Apr 28 j 08:53 22° Υ 41'19 0° -24'-40 -1662 Nov 27 j 18:21 21°**8**31'33 17.78450 AU conjunction min. Earth dist. -1668 Apr 28 j 08:53 22°**Υ**41'19 0°24'40 direct -1661 Feb 09 j 21:54 19°**8**29'50 minimum elong -1668 Apr 28 j 00:10 22°**Υ**40'03 20.24150 AU max. Earth dist. -1668 Aug 17 j 03:33 26°**Υ**54'38 -1661 May 31 j 19:23 23°\(\mathbf{8}\)50'14 0°-1'-25 retrograde conjunction -1668 Oct 31 j 10:12 24° **Y** 52'48 0° -25'-44 -1661 May 31 j 19:24 23°**8**50'14 opposition minimum elong 0°01'25 min. Earth dist. -1668 Oct 31 j 18:29 24° **Y** 51'55 18.20642 AU behind sun begin -1661 May 31 j 12:36 23°**8**49'14 direct -1667 Jan 14 j 01:12 22°**Υ**51'26 behind sun end -1661 Jun 01 j 02:12 23°**8**51'14 max. Earth dist. -1661 May 30 j 19:53 23°**8**46'40 19.75044 AU conjunction -1667 May 03 j 04:13 27°**Υ**01'53 0°-21'-43 retrograde -1661 Sep 18 j 16:48 28°**8**09'44 minimum elong -1667 May 03 j 04:13 27°**Y**01'53 0°21'42 asc. node -1661 Oct 20 j 18:44 27°842'33 max. Earth dist. -1667 May 02 j 17:32 27°**Υ**00'19 20.17168 AU -1661 Dec 01 j 16:46 26°\(\colon\)07'13 0°00'27 opposition

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, page 17 Attention, astronomical year style is used: The year -1661 in astronomical counting style is the year 1662 BCE in historical counting style.

Attention, astronom				unting style is the year	1662 BCE in historical	counting style	
min. Earth dist.	-1661 Dec 02 j 12:16	26° 8 05'06	17.71685 AU		-1654 Dec 04 j 13:50	30°RⅡ	
direct	-1660 Feb 14 j 18:36	24° 8 03'03		opposition	-1653 Jan 02 j 13:37		
				min. Earth dist.	-1653 Jan 03 j 13:38		17.35390 AU
conjunction	-1660 Jun 04 j 20:41			direct	-1653 Mar 19 j 09:01	26° Ⅱ 42'17	
minimum elong	-1660 Jun 04 j 20:42		0°02'20		-1653 Jun 20 j 01:23	0 \circ \odot	
behind sun begin	-1660 Jun 04 j 13:55						
behind sun end	-1660 Jun 05 j 03:30			conjunction	-1653 Jul 09 j 19:40	1° © 13'19	
max. Earth dist.	-1660 Jun 03 j 20:43		19.68385 AU	minimum elong	-1653 Jul 09 j 19:40	1° © 13'19	
	-1660 Jul 01 j 08:51	Π °0		max. Earth dist.	-1653 Jul 08 j 14:29		19.33717 AU
retrograde	-1660 Sep 22 j 12:19	2° Ⅱ 45'14		retrograde	-1653 Oct 26 j 06:32	5° © 37'17	
opposition	-1660 Dec 05 j 10:31	0° Ⅱ 42'37		opposition	-1652 Jan 07 j 12:58	3°534'40	
min. Earth dist.	-1660 Dec 06 j 07:31		17.65169 AU	min. Earth dist.	-1652 Jan 08 j 14:00		17.32246 AU
	-1660 Dec 22 j 01:18	30° ₹ 8		direct	-1652 Mar 23 j 10:05	1° 5 28'15	
direct	-1659 Feb 18 j 14:14			max. Earth dist.	-1652 Jul 12 j 19:41	5° © 55'41	19.30814 AU
	-1659 Apr 16 j 14:41	Π $^{\circ}$ 0					
				conjunction	-1652 Jul 14 j 00:28	6°500'12	
conjunction	-1659 Jun 09 j 22:24	3° Ⅱ 01'30		minimum elong	-1652 Jul 14 j 00:28	6°500'12	0°29'24
minimum elong	-1659 Jun 09 j 22:25	3° Ⅱ 01'31	0°05'57	retrograde	-1652 Oct 30 j 08:23		
behind sun begin	-1659 Jun 09 j 15:57	3° I I00'33		opposition	-1651 Jan 11 j 12:57	8°921'55	
behind sun end	-1659 Jun 10 j 04:53	3° Ⅱ 02'28	10 (2021 177	min. Earth dist.	-1651 Jan 12 j 13:18		17.29582 AU
max. Earth dist.	-1659 Jun 08 j 20:08		19.62034 AU	direct	-1651 Mar 28 j 12:58	6°©15'25	
retrograde	-1659 Sep 27 j 09:51	7° Ⅱ 22'25	0000121	max. Earth dist.	-1651 Jul 18 j 00:22	43'32فو°10	19.28387 AU
opposition	-1659 Dec 10 j 05:04	5° Ⅱ 19'41		. ,.	1651 1 1 10:05 25	100610106	0022100
min. Earth dist.	-1659 Dec 11 j 02:49		17.59012 AU	conjunction	-1651 Jul 19 j 05:25		0°32'09
direct	-1658 Feb 23 j 12:12	3° Ⅱ 14'42	10.50004.411	minimum elong	-1651 Jul 19 j 05:24		0°32'10
max. Earth dist.	-1658 Jun 13 j 22:41	/°Щ35′37	19.56064 AU	retrograde	-1651 Nov 04 j 08:38		0027110
	1650 1 15:00 45	70 T 20127	0000120	opposition	-1650 Jan 16 j 13:39		
conjunction	-1658 Jun 15 j 00:45	7° Ⅱ 39'37		min. Earth dist.	-1650 Jan 17 j 14:57		17.27410 AU
minimum elong	-1658 Jun 15 j 00:45	7° I I39'37	0°09'32	direct	-1650 Apr 02 j 15:17		10.26455 ATT
behind sun begin	-1658 Jun 14 j 19:10	7° Ⅱ 38'47		max. Earth dist.	-1650 Jul 23 j 05:24	15*932*11	19.26455 AU
behind sun end	-1658 Jun 15 j 06:20	7° Ⅱ 40′27		:	1650 I1 24: 10:10	150627144	0924142
retrograde	-1658 Oct 02 j 07:29	12° Ⅱ 01'10	0012121	conjunction	-1650 Jul 24 j 10:18		
opposition	-1658 Dec 15 j 00:26	9° ∏ 58'22		minimum elong	-1650 Jul 24 j 10:18		0°34'45
min. Earth dist.	-1658 Dec 15 j 22:59	9° Ц 55′54 7° Ц 53′01	17.53258 AU	retrograde	-1650 Nov 09 j 10:42		0940102
direct	-1657 Feb 28 j 10:08 -1657 Jun 18 j 23:34		10 50541 ATT	opposition	-1649 Jan 21 j 14:48 -1649 Jan 22 j 15:00		
max. Earth dist.	-103 / Juli 18 J 25.34	12 113 00	19.30341 AU	min. Earth dist. direct	•		17.23713 AU
agniumation	-1657 Jun 20 j 03:37	120TI0/10	0012102		-1649 Apr 07 j 19:59 -1649 Jul 28 j 10:57		10 24007 ATT
conjunction	-1657 Jun 20 j 03:37 -1657 Jun 20 j 03:37			max. Earth dist.	-1049 Jul 28 j 10:57	20-9921720	19.24997 AU
behind sun begin	-1657 Jun 19 j 23:42		0 13 03	conjunction	-1649 Jul 29 j 15:13	2006225154	0°37'03
behind sun end	-1657 Jun 20 j 07:31			minimum elong	-1649 Jul 29 j 15:13		0°37'05
retrograde	-1657 Oct 07 j 05:51			retrograde	-1649 Nov 14 j 10:42		0 3703
opposition	-1657 Dec 19 j 20:29		0°16'27	opposition	-1648 Jan 26 j 16:33		0°42'30
min. Earth dist.	-1657 Dec 20 j 19:47			min. Earth dist.	-1648 Jan 27 j 17:28		
direct	-1656 Mar 04 j 08:59		17.47994 AU	direct	-1648 Apr 11 j 23:46		17.24314 AU
max. Earth dist.	-1656 Jun 23 j 03:42		10 45527 ATT	uncet	-1046 Apr 11 j 25.40	20 34121	
max. Earm dist.	-1030 Juli 23 J 03.42	10 1130 20	19.43327 AU	conjunction	-1648 Aug 02 j 19:46	25°6515'10	0°39'07
conjunction	-1656 Jun 24 j 07:09	17°∏00'35	0°16'32	minimum elong	-1648 Aug 02 j 19:46		0°39'08
minimum elong	-1656 Jun 24 j 07:08	17° I 00'35		max. Earth dist.	-1648 Aug 02 j 15:36		
retrograde	-1656 Oct 11 j 05:44		0 10 33	retrograde	-1648 Nov 18 j 12:18		17.24000 AC
opposition	-1656 Dec 23 j 17:29		0°20'18	opposition	-1647 Jan 30 j 18:36		0°44'40
min. Earth dist.	-1656 Dec 24 j 16:55			min. Earth dist.	-1647 Jan 31 j 17:57		
direct	-1655 Mar 09 j 08:28		17.43243 AO	direct	-1647 Apr 17 j 05:36		17.23040 AU
max. Earth dist.	-1655 Jun 28 j 05:56		19.41050 ATT	direct	-1647 Aug 06 j 17:56		
max. Latin dist.	-1033 Juli 20 J 03.30	21 11 30 33	17.41030 AC		-104/ Aug 00 j 17.30	0 86	
conjunction	-1655 Jun 29 j 10:46	21°π43'22	0°19'56	conjunction	-1647 Aug 07 j 23:56	0° Ω 04'45	0°40'55
minimum elong	-1655 Jun 29 j 10:46			minimum elong	-1647 Aug 07 j 23:56	0° Ω 04'45	0°40'57
retrograde	-1655 Oct 16 j 05:07		J 17 JU	max. Earth dist.	-1647 Aug 06 j 21:28		19.23673 AU
opposition	-1655 Dec 28 j 15:15		0°24'02	retrograde	-1647 Nov 23 j 12:10	4° Ω 29'01	. 7.23013 AU
min. Earth dist.	-1655 Dec 29 j 15:29			opposition	-1646 Feb 04 j 21:04	2°Ω26'46	0°46'31
direct	-1654 Mar 14 j 08:05		11.57055 AU	min. Earth dist.	-1646 Feb 05 j 20:35		17.23741 AU
max. Earth dist.	-1654 Jul 03 j 10:54		19 37126 ATT	direct	-1646 Apr 22 j 10:28	0°Ω19'59	11.23/71 AU
max. Latur dist.	105 T Jul 05 J 10.54	20 11 2313	17.5/120 AU	max. Earth dist.	-1646 Aug 12 j 01:22		19.23867 AU
conjunction	-1654 Jul 04 j 15:04	26° Ⅱ 27'39	0°23'13	max. Latin dist.	10-10 Aug 12 J 01.22	7 OLT24/	17.2300/ AU
minimum elong	-1654 Jul 04 j 15:04			conjunction	-1646 Aug 13 j 03:38	4° Ω 53'57	0°42'25
mminum ciong	-1654 Sep 07 j 22:07	20 H2739 0°95	0 23 13	minimum elong	-1646 Aug 13 j 03:38	4° Ω 53'57	
retrograde	-1654 Oct 21 j 06:25	0°951'15		retrograde	-1646 Nov 28 j 13:13	9° Ω 17'58	0 74 40
. on ograde	105 1 500 21 1 00.25	U - 21 13		Tonogrado	10101101 20 1 13.13	, 061/30	

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1645 in astronomical counting style is the year 1646 BCE in historical counting style. -1645 Feb 09 i 23:26 7°Ω15'45 0°48'01 minimum elong -1638 Sep 20 j 10:23 13° m 01'16 0°43'23 opposition min. Earth dist. -1645 Feb 10 j 21:08 7°Ω13'23 17.24234 AU max. Earth dist. -1638 Sep 19 j 23:34 12° mp 59'34 19.47756 AU -1645 Apr 27 j 16:39 -1637 Jan 05 j 10:15 17° mp 20'59 direct 5°Ω08'58 retrograde -1645 Aug 17 j 07:11 -1637 Mar 20 j 21:16 15° Mp 19'52 0°47'42 max. Earth dist. 9°**Ω**38'57 19.24668 AU opposition -1637 Mar 21 j 06:18 15° Mp 18'55 17.50348 AU min. Earth dist. -1645 Aug 18 j 06:57 9°**Ω**42'43 0°43'37 -1637 Jun 06 j 01:13 13° Mp 15'06 conjunction direct -1645 Aug 18 j 06:57 9°**Ω**42'43 minimum elong 0°43'38 -1645 Dec 03 j 12:57 14°**Ω**06'22 -1637 Sep 25 j 07:55 17° Mp 42'05 0°42'10 retrograde conjunction -1637 Sep 25 j 07:55 17° Mp 42'05 0°42'10 opposition -1644 Feb 15 j 02:19 12° Ω 04'14 0°49'11 minimum elong -1637 Sep 24 j 23:27 17° Mp 40'46 19.53001 AU min. Earth dist. -1644 Feb 15 j 23:28 12° Ω 01'56 17.25353 AU max. Earth dist. direct -1644 May 01 j 21:07 9°**Ω**57'32 retrograde -1636 Jan 10 j 08:17 22° m 01'02 -1636 Mar 24 j 23:15 20° m 00'03 0°46'10 max. Earth dist. -1644 Aug 21 j 10:13 14° **Ω**27'12 19.26122 AU opposition -1636 Mar 25 j 05:44 19° **m** 59'22 17.55737 AU min. Earth dist. conjunction -1644 Aug 22 j 09:21 14°**Ω**30'52 0°44'30 direct -1636 Jun 10 j 05:11 17° M 55'39 minimum elong -1644 Aug 22 j 09:21 14°**Ω**30'52 0°44'32 -1644 Aug 30 j 01:07 15°**Ω** conjunction -1636 Sep 29 j 04:24 22° m 21'16 0°40'39 retrograde -1644 Dec 07 j 14:11 18° **Ω**54'08 minimum elong -1636 Sep 29 j 04:24 22° m 21'16 0°40'39 opposition -1643 Feb 19 j 05:10 16° **Ω**52'04 0°50'01 max. Earth dist. -1636 Sep 28 j 21:48 22° m 20'14 19.58537 AU min. Earth dist. -1643 Feb 20 j 00:10 16° Ω50'00 17.27143 AU retrograde -1635 Jan 14 j 04:09 26° m 39'24 -1643 Apr 13 j 08:17 15°RΩ opposition -1635 Mar 30 j 00:53 24° mg 38'33 direct -1643 May 07 j 02:24 $14^{\circ}\Omega 45'28$ min. Earth dist. -1635 Mar 30 j 06:19 24° mp 37'58 17.61413 AU -1643 May 30 i 12:17 $15^{\circ}\Omega$ direct -1635 Jun 15 j 06:28 22° m 34'29 conjunction -1643 Aug 27 i 11:22 19° Ω 18'17 0°45'05 conjunction -1635 Oct 04 i 00:05 26° m 58'38 0°38'54 -1643 Aug 27 j 11:22 19° Ω18'17 0°45'06 minimum elong -1635 Oct 04 i 00:05 26° m 58'38 0°38'54 minimum elong -1643 Aug 26 j 15:15 19° **Ω**15'06 19.28247 AU max. Earth dist. -1635 Oct 03 j 19:26 26° mp 57'55 19.64342 AU max. Earth dist. -1643 Dec 12 j 14:01 23° Ω 41'05 -1635 Nov 26 j 09:00 0∘**⊽** retrograde -1642 Feb 24 j 07:59 $21^{\circ}\Omega$ 39'08 $0^{\circ}50'29$ -1634 Jan 19 j 01:09 1°**£**15'54 opposition retrograde -1642 Feb 25 j 01:46 21°**Ω**37'13 17.29594 AU -1634 Mar 16 j 19:16 30°R M min. Earth dist. -1642 May 12 j 05:50 $19^{\circ}\Omega$ 32'45 -1634 Apr 04 j 01:39 29° Mp 15'09 0° 42'13 direct opposition -1634 Apr 04 j 04:19 29° Mp 14'52 17.67318 AU min. Earth dist. -1642 Sep 01 j 12:36 $24^{\circ}\Omega 04'54$ $0^{\circ}45'22$ -1634 Jun 20 j 09:05 27° m 11'26 conjunction direct -1642 Sep 01 j 12:36 24°Ω04'54 0°45'23 -1634 Sep 13 j 02:35 0∘<u>ଫ</u> minimum elong -1642 Aug 31 j 17:19 24° **Ω**01'51 19.31035 AU max. Earth dist. -1634 Oct 08 j 18:51 -1642 Dec 17 j 14:57 $28^{\circ}\Omega$ 27'12 1°**2**34'04 0°36'53 retrograde conjunction -1641 Mar 01 j 10:51 $26^{\circ}\Omega 25'23$ $0^{\circ}50'37$ -1634 Oct 08 j 18:51 opposition minimum elong 1°**2**34'04 0°36'53 -1641 Mar 02 j 02:40 26° **Ω**23'42 17.32698 AU -1634 Oct 08 j 16:24 min. Earth dist. max. Earth dist. 1°**2**33'41 19.70357 AU direct -1641 May 17 j 10:13 $24^{\circ}\Omega$ 19'15 retrograde -1633 Jan 23 j 19:28 5°**♀**50'26 opposition -1633 Apr 09 j 02:10 3°**2**49'46 0°39'51 conjunction -1641 Sep 06 j 13:13 28° Ω50'38 0°45'20 min. Earth dist. -1633 Apr 09 j 03:52 3°**º**49'35 17.73442 AU minimum elong -1641 Sep 06 j 13:13 28° Ω50'38 0°45'20 direct -1633 Jun 25 j 08:36 1°**≏**46'24 max. Earth dist. -1641 Sep 05 j 21:00 28° **Ω**48'04 19.34445 AU -1641 Sep 24 j 23:30 -1633 Oct 13 j 12:24 6° **2**07'24 0°34'40 conjunction retrograde -1641 Dec 22 j 14:29 3°m/12'21 -1633 Oct 13 j 12:24 6° **2**07'24 0°34'40 minimum elong -1640 Mar 05 j 13:44 1° m 10'44 0°50'23 max. Earth dist. -1633 Oct 13 j 11:46 6°**2**07'18 19.76595 AU opposition -1640 Mar 06 i 03:47 min. Earth dist. 1° 1009'14 17.36381 AU retrograde -1632 Jan 28 j 15:19 10° **2**22'51 -1640 Apr 03 j 19:11 30°RΩ opposition -1632 Apr 13 i 01:52 8°**2**22'15 0°37'14 direct -1640 May 21 j 13:59 $29^{\circ}\Omega04'55$ min. Earth dist. -1632 Apr 13 i 00:26 8°**2**2'24 17.79775 AU -1640 Jul 06 j 22:43 0° m direct -1632 Jun 29 i 09:22 6°**₽**19'13 -1640 Sep 10 j 13:02 3° m 35'22 0°44'59 -1632 Oct 17 i 05:03 10° \(\Omega\) 38'35 0°32'14 conjunction conjunction -1640 Sep 10 i 13:02 3° m 35'22 0°45'00 minimum elong -1632 Oct 17 j 05:03 10° **△**38'35 0°32'15 minimum elong max. Earth dist. -1640 Sep 09 j 21:59 3° m/32'59 19.38412 AU max. Earth dist. -1632 Oct 17 j 07:13 10°**2**38'55 19.83037 AU retrograde -1640 Dec 26 j 14:03 7° m 56'29 retrograde -1631 Feb 01 j 08:12 14° **2**53'05 opposition -1639 Mar 10 j 16:29 5° m 55'02 0°49'50 opposition -1631 Apr 18 j 00:55 12°**⊆**52'33 0°34'26 min. Earth dist. -1639 Mar 11 j 04:53 5° M 53'42 17.40609 AU min. Earth dist. -1631 Apr 17 j 22:23 12°**♀**52'49 17.86335 AU direct -1639 May 26 j 17:45 3° m 49'33 direct -1631 Jul 04 j 07:08 10°**2**49'53 -1639 Sep 15 j 12:06 8° m 18'58 0°44'20 -1631 Oct 21 j 20:34 15°**♀**07'34 0°29'38 conjunction conjunction -1639 Sep 15 j 12:06 8° **m**) 18'58 -1631 Oct 21 j 20:34 15°**£**07'34 minimum elong 0°44'21 minimum elong 0°29'37 8° Mp 17'02 19.42880 AU max. Earth dist. -1639 Sep 14 j 23:51 max. Earth dist. -1631 Oct 22 j 00:25 15°**2**08'10 19.89715 AU retrograde -1639 Dec 31 j 12:50 12° m 39'25 retrograde -1630 Feb 06 j 02:34 19°**2**21'09 opposition -1638 Mar 15 j 19:01 10° m 38'08 0°48'56 opposition -1630 Apr 22 j 23:04 17°**Ω**20'41 0°31'26 min. Earth dist. -1638 Mar 16 j 05:16 10° Mp 37'02 17.45280 AU min. Earth dist. -1630 Apr 22 j 17:14 17°**£**21'18 17.93120 AU direct -1638 May 31 j 22:10 8° m 33'01 direct -1630 Jul 09 j 05:22 15°**£**18'23 -1638 Sep 20 j 10:23 13° Mp 01'16 0°43'24 -1630 Oct 26 j 11:13 19°**೨**34'25 0°26'53 conjunction conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1630 in astronomical counting style is the year 1631 BCE in historical counting style. -1630 Oct 26 j 11:13 19°**2**34'25 0°26'52 minimum elong conjunction -1623 Nov 24 j 18:34 19°ML49'13 0°04'51 max. Earth dist. -1630 Oct 26 j 18:09 19°**£**35'29 19.96605 AU minimum elong -1623 Nov 24 j 18:35 19°M49'13 0°04'50 -1629 Feb 10 j 18:22 23° **△**47'04 behind sun begin -1623 Nov 24 j 12:12 19°ML48'17 retrograde -1629 Apr 27 j 20:39 21°**2**46'44 0°28'16 -1623 Nov 25 j 00:57 19°M 50'09 opposition behind sun end -1629 Apr 27 j 13:32 21°**2**47'28 18.00120 AU -1623 Nov 25 j 13:26 19°**M** 52'02 20.47176 AU min. Earth dist. max. Earth dist. -1629 Jul 14 j 01:30 19° **2**44'51 -1622 Mar 13 j 01:37 23° M 56'04 direct retrograde -1622 May 28 j 10:11 21° ML58'44 18.50562 AUmin. Earth dist. -1629 Oct 31 j 00:53 23° **2**59'13 0°24'00 -1622 May 29 j 06:04 21° M.56'43 0°03'26 conjunction opposition -1629 Oct 31 j 00:53 23°**♀**59'13 0°23'58 -1622 Aug 14 j 02:10 19°M 57'54 minimum elong direct -1629 Oct 31 j 09:16 24° **2**00'29 20.03714 AU max. Earth dist. retrograde -1628 Feb 15 j 11:46 28° **2**10'58 conjunction -1622 Nov 29 j 03:14 24°M01'25 0°01'30 -1628 May 01 j 17:21 26°**♀**10'46 0°24'59 -1622 Nov 29 j 03:13 24°ML01'25 0°01'28 opposition minimum elong -1628 May 01 j 07:01 26°**2**11'49 18.07317 AU -1622 Nov 28 j 20:41 24°ML00'28 min. Earth dist. behind sun begin direct -1628 Jul 17 j 21:08 24°**♀**09'19 behind sun end -1622 Nov 29 j 09:44 24°M 02'22 max. Earth dist. -1622 Nov 30 j 00:20 24°ML04'33 20.53867 AU conjunction -1628 Nov 03 j 13:42 28° **2**22'03 0°20'59 retrograde -1621 Mar 17 j 11:56 28° ML07'31 minimum elong -1628 Nov 03 j 13:42 28°**£**22'03 0°20'58 desc. node -1621 May 08 j 18:36 27° ML06'19 max. Earth dist. -1628 Nov 04 j 01:12 28°**2**23'48 20.10979 AU opposition -1621 Jun 02 j 21:37 26°ML08'15 -1628 Nov 30 j 23:58 0°M min. Earth dist. -1621 Jun 02 j 00:57 26°ML10'20 18.57098 AU retrograde -1627 Feb 19 j 02:30 2°M32'56 direct -1621 Aug 18 j 16:36 24° ML09'46 opposition -1627 May 06 j 13:24 0°ML32'53 0°21'34 min. Earth dist. -1627 May 06 i 01:52 0°M34'04 18.14635 AU conjunction -1621 Dec 03 j 11:09 28°M 11'52 0°-1'-55 -1627 May 20 j 02:44 30°R **≏** minimum elong -1621 Dec 03 j 11:08 28° ML11'52 0°01'57 direct -1627 Jul 22 j 16:03 28° **△**31'55 behind sun begin -1621 Dec 03 i 04:37 28°M 10'55 -1627 Sep 20 j 11:15 0°M behind sun end -1621 Dec 03 j 17:40 28° ML 12'48 max. Earth dist. -1621 Dec 04 j 08:14 28° ML 14'59 20.60247 AU -1627 Nov 08 j 01:41 2°ML43'02 0°17'53 -1620 Jan 03 j 21:14 0°×7 conjunction -1627 Nov 08 j 01:41 2°ML43'02 0°17'52 retrograde -1620 Mar 21 j 00:11 2°**х** 17′14 minimum elong -1627 Nov 08 j 14:11 2°M44'55 20.18340 AU opposition -1620 Jun 06 j 12:19 0°**∡**18'01 0°-3'-54 max. Earth dist. -1626 Feb 23 j 18:55 6°M53'04 min. Earth dist. -1620 Jun 05 j 14:27 0°**尽**20'12 18.63324 AU retrograde -1620 Jun 14 j 00:30 30°RM -1626 May 11 j 08:27 4°ML53'10 0°18'03 opposition -1626 May 10 j 18:14 -1620 Aug 22 j 05:03 28°ML19'48 min. Earth dist. 4°**ጤ**54'37 18.22015 AU direct -1626 Jul 27 j 09:42 -1620 Oct 25 j 12:38 0°×7 direct 2°M52'39 -1620 Dec 06 j 18:33 -1626 Nov 12 j 13:01 7°ML02'12 0°14'41 2°**₹**20'33 0°-5'-12 conjunction conjunction -1626 Nov 12 j 13:01 7°ML02'12 0°14'40 -1620 Dec 06 j 18:34 0°05'14 minimum elong minimum elong 2°**҂**¹20'33 -1626 Nov 12 j 10:04 -1620 Dec 06 j 12:14 behind sun begin 7°**ጤ**01'46 behind sun begin 2°**∡**19'38 behind sun end -1626 Nov 12 j 15:58 7°**IL**02'38 behind sun end -1620 Dec 07 j 00:54 2°**∡**121'27 max. Earth dist. -1626 Nov 13 j 04:25 7°M04'31 20.25713 AU max. Earth dist. -1620 Dec 07 j 17:48 2°**₹**'23'59 20.66301 AU retrograde -1625 Feb 28 j 08:27 11°ML11'24 retrograde -1619 Mar 25 j 09:32 6°**х¹**25′12 min. Earth dist. -1625 May 15 j 11:48 9°**ጤ**13'14 18.29367 AU min. Earth dist. -1619 Jun 10 j 03:30 4°**尽**28'16 18.69211 AU -1625 May 16 j 03:04 9°M11'41 0°14'28 -1619 Jun 11 j 02:10 4°**尽**26'00 0°-7'-30 opposition opposition 7°**I**L11'39 direct -1625 Aug 01 j 03:25 direct -1619 Aug 26 j 17:45 2°**×**¹28'03 -1625 Nov 16 j 23:23 11°ML19'36 0°11'26 conjunction -1619 Dec 11 j 01:13 6° ₹27'28 0°-8'-25 conjunction -1625 Nov 16 j 23:23 11°M 19'36 0°11'26 -1619 Dec 11 i 01:13 6°**҂**¹27'28 minimum elong minimum elong 0°08'28 -1625 Nov 16 j 18:35 11°ML18'54 -1619 Dec 10 i 19:28 6°**х** 26′39 behind sun begin behind sun begin -1625 Nov 17 j 04:12 11°M20'19 behind sun end behind sun end -1619 Dec 11 i 06:58 6°**х** 28′18 -1625 Nov 17 j 15:30 11°M22'02 20.33030 AU max. Earth dist. max. Earth dist. -1619 Dec 12 i 00:24 6°**х** 30′53 20.72032 AU -1624 Jan 30 i 19:11 15°M retrograde -1618 Mar 29 i 19:49 10° ₹ 31'28 -1624 Mar 03 i 23:43 15° ML 28'01 opposition -1618 Jun 15 i 15:10 8°**₹**32'15 0°-11'-2 retrograde -1624 Apr 07 j 00:23 15°RML min. Earth dist. -1618 Jun 14 j 15:33 8° ₹34'37 18.74805 AU -1624 May 19 j 20:53 13°M28'26 0°10'49 direct -1618 Aug 31 j 04:02 6°**х** 34'31 opposition -1624 May 19 j 03:25 13°ML30'12 18.36632 AU min. Earth dist. -1624 Aug 04 j 19:41 11°M28'50 -1618 Dec 15 j 07:31 10° ₹32'44 0°-11'-34 direct conjunction -1624 Nov 10 j 13:51 15°M minimum elong -1618 Dec 15 j 07:30 10° ₹32'44 0°11'36 behind sun begin -1618 Dec 15 j 02:46 10° ₹32'03 -1624 Nov 20 j 09:24 15°M35'17 0°08'09 -1618 Dec 15 j 12:14 10° ₹33'24 conjunction behind sun end -1624 Nov 20 j 09:24 15°M35'17 0°08'07 -1618 Dec 16 j 08:53 10° ₹ 36'27 20.77477 AU minimum elong max. Earth dist. -1624 Nov 20 j 03:33 15°M34'25 -1617 Apr 03 j 04:50 14° ₹ 36'05 behind sun begin retrograde -1617 Jun 19 j 02:50 12° ₹39'21 18.80118 AU behind sun end -1624 Nov 20 j 15:14 15°M 36'08 min. Earth dist. max. Earth dist. -1624 Nov 21 j 04:04 15°M38'04 20.40207 AU opposition -1617 Jun 20 j 03:29 12° ₹36'53 0°-14'-30 retrograde -1623 Mar 08 j 11:44 19° ML42'53 direct -1617 Sep 04 j 15:10 10° ₹ 39'23 opposition -1623 May 24 j 13:49 17° ML43'27 $0^{\circ}07'08$ min. Earth dist. -1623 May 23 j 19:33 17°ML45'18 18.43715 AU conjunction -1617 Dec 19 j 13:06 14° ₹ 36'27 0°-14'-38 direct -1623 Aug 09 j 11:43 15°M44'16 -1617 Dec 19 j 13:05 14° ₹36'27 0°14'42 minimum elong behind sun begin -1617 Dec 19 j 10:12 14° ₹36'02

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1617 in astronomical counting style is the year 1618 BCE in historical counting style. -1617 Dec 19 i 15:58 14° ₹36'51 behind sun end minimum elong -1608 Jan 20 i 03:13 16°₹32'11 0°35'14 max. Earth dist. -1617 Dec 20 j 14:25 14° 🗷 40'08 20.82661 AU max. Earth dist. -1608 Jan 21 j 06:40 16° 중36'06 21.12011 AU -1616 Apr 06 j 14:07 18°**₹**39'16 -1608 May 09 j 08:44 20°る32'49 retrograde retrograde -1616 Jun 23 j 15:08 16° ₹ 40'04 0°-17'-51 -1608 Jul 26 j 15:44 18° 중34'00 0°-39'-58 opposition opposition -1616 Jun 22 j 13:44 16° ₹ 42'36 18.85186 AU -1608 Jul 25 j 13:57 18°る36'34 19.12874 AU min. Earth dist. min. Earth dist. -1608 Oct 10 j 03:38 16°♂38'13 -1616 Sep 07 j 23:34 14° ₹ 42'47 direct direct -1616 Dec 22 j 18:35 18° ₹ 38'49 0°-17'-38 -1607 Jan 23 j 08:06 20°₹29'23 0°-37'-6 conjunction conjunction -1616 Dec 22 j 18:35 18° ₹38'49 -1607 Jan 23 j 08:06 20°중29'23 0°37'09 minimum elong 0°17'40 minimum elong -1607 Jan 24 j 11:57 20° ₹33'21 21.13484 AU max. Earth dist. -1616 Dec 23 j 21:53 18° ₹ 42'47 20.87587 AU max. Earth dist. -1607 May 13 j 16:51 24°**♂**29'57 retrograde -1615 Apr 10 j 22:44 22°**₹**'41'07 retrograde -1615 Jun 26 j 23:30 20° **₹** 44'35 18.89975 AU -1607 Jul 30 j 22:46 22° 중31'05 0°-41'-59 min. Earth dist. opposition -1615 Jun 28 j 01:49 20° **₹** 41'57 -1607 Jul 29 j 21:10 22° 중33'39 19.14043 AU opposition 0°-21'-6 min. Earth dist. -1607 Oct 14 j 10:00 20° 35'19 direct -1615 Sep 12 j 08:54 18° ₹ 44'55 direct conjunction -1615 Dec 26 j 23:34 22° x 40'01 0°-20'-31 conjunction -1606 Jan 27 j 12:49 24°중26'15 0°-38'-50 minimum elong -1615 Dec 26 j 23:34 22° ₹ 40'01 0°20'33 minimum elong -1606 Jan 27 j 12:49 24°♂26'15 0°38'53 max. Earth dist. -1615 Dec 28 j 02:30 22° ₹ 43'55 20.92237 AU max. Earth dist. -1606 Jan 28 j 14:54 24°중29'58 21.14368 AU retrograde -1614 Apr 15 j 07:31 26° ₹ 41'54 retrograde -1606 May 18 j 00:11 28°る26'49 min. Earth dist. -1614 Jul 01 j 09:29 24° ₹ 45'27 18.94486 AU min. Earth dist. -1606 Aug 03 j 05:31 26°る30'17 19.14650 AU opposition -1614 Jul 02 j 12:09 24°**⋌**142'48 0°-24'-14 opposition -1606 Aug 04 j 05:44 26°る27'52 0°-43'-47 direct -1614 Sep 16 i 16:00 22° ₹ 45'59 direct -1606 Oct 18 j 13:19 24°る32'04 conjunction -1614 Dec 31 i 04:19 26° \$\frac{7}{40}\$'14 0°-23'-18 conjunction -1605 Jan 31 i 17:39 28°る22'50 0°-40'-22 minimum elong -1614 Dec 31 i 04:19 26° ₹ 40'14 0°23'20 minimum elong -1605 Jan 31 i 17:38 28°₹22'50 0°40'25 max. Earth dist. -1613 Jan 01 j 09:00 26° ₹ 44'23 20.96582 AU max. Earth dist. -1605 Feb 01 j 20:12 28° 중26'37 21.14707 AU -1613 Mar 08 j 21:58 0°₹ -1605 Mar 01 j 23:53 0°≈≈ -1613 Apr 19 j 15:52 0°る41'46 retrograde -1605 May 22 j 07:59 2°≈23'26 retrograde -1613 Jun 01 j 17:49 30°R ✓ -1605 Aug 08 j 12:14 0°≈24'23 0°-45'-22 opposition -1605 Aug 07 j 12:07 0°**≈**26'48 19.14726 AU -1613 Jul 06 j 21:53 28° ₹ 42'44 0°-27'-15 min. Earth dist. opposition -1613 Jul 05 j 18:24 28° ₹745'29 18.98660 AU -1605 Aug 18 j 17:27 30°R♂ min. Earth dist. -1613 Sep 20 j 23:41 26° ₹ 46'10 -1605 Oct 22 j 19:26 28°중28'32 direct direct -1613 Dec 23 j 21:02 -1605 Dec 23 j 07:59 0°궁 0°≈ -1612 Jan 04 j 08:53 -1604 Feb 04 j 22:36 0°る39'41 0°-25'-57 2°≈19'14 0°-41'-43 conjunction conjunction -1612 Jan 04 j 08:53 0°る39'41 0°25'59 -1604 Feb 04 j 22:36 minimum elong minimum elong 2°≈19'14 0°41'46 -1612 Jan 05 j 12:54 0°る43'43 21.00579 AU -1604 Feb 05 j 23:23 max. Earth dist. max. Earth dist. 2°≈22'45 21.14544 AU retrograde -1612 Apr 23 j 00:22 4°₹40'56 retrograde -1604 May 25 j 15:30 6°≈19'55 min. Earth dist. -1612 Jul 09 j 03:48 2°る44'40 19.02474 AU opposition -1604 Aug 11 j 18:25 4°≈20'44 0°-46'-44 opposition -1612 Jul 10 j 07:04 2°る41'57 0°-30'-7 min. Earth dist. -1604 Aug 10 j 19:48 4°≈23'00 19.14340 AU direct -1612 Sep 24 j 05:43 0°る45'36 direct -1604 Oct 25 j 22:37 2°≈24'47 -1611 Jan 07 j 13:33 4°る38'29 0°-28'-29 -1603 Feb 08 j 03:56 6°≈15'32 0°-42'-52 conjunction conjunction -1611 Jan 07 j 13:33 4°る38'29 0°28'32 -1603 Feb 08 j 03:56 6°≈15'32 0°42'54 minimum elong minimum elong max. Earth dist. -1611 Jan 08 j 18:50 4°る42'41 21.04178 AU max. Earth dist. -1603 Feb 09 j 05:03 6°≈19'06 21.13933 AU 8°る39'29 -1603 May 29 i 22:59 10°≈16'21 retrograde -1611 Apr 27 j 08:34 retrograde -1611 Jul 14 i 15:45 6°**ප්**40'36 0°-32'-50 opposition min. Earth dist. -1603 Aug 15 i 01:46 8°≈19'21 19.13512 AU min. Earth dist. -1611 Jul 13 j 12:05 6°る43'21 19.05847 AU opposition -1603 Aug 16 j 00:20 8°≈17'04 0°-47'-54 direct -1611 Sep 28 j 12:15 4°₹44'27 direct -1603 Oct 30 i 03:55 6°≈21'03 -1610 Jan 11 j 17:56 8°**궁**36'46 0°-30'-53 -1602 Feb 12 i 09:12 10°≈11'55 0°-43'-48 conjunction conjunction minimum elong -1610 Jan 11 j 17:56 8°**궁**36'46 0°30'55 minimum elong -1602 Feb 12 j 09:12 10°≈11'55 0°43'51 max. Earth dist. -1610 Jan 12 j 22:07 8°る40'49 21.07315 AU max. Earth dist. -1602 Feb 13 j 08:27 10°≈15'13 21.12903 AU -1610 May 01 j 16:39 12°る37'37 retrograde retrograde -1602 Jun 03 j 07:02 14°≈12'58 min. Earth dist. -1610 Jul 17 j 21:11 10°정41'27 19.08744 AU min. Earth dist. -1602 Aug 19 j 09:14 12°≈15'41 19.12289 AU opposition -1610 Jul 19 j 00:07 10°₹38'46 0°-35'-23 opposition -1602 Aug 20 j 06:17 12°≈13'34 0°-48'-50 direct -1610 Oct 02 j 17:19 8°₹42'48 direct -1602 Nov 03 j 07:12 10°≈17'26 -1609 Jan 15 j 22:39 12°₹34'39 0°-33'-7 conjunction -1601 Feb 16 j 15:08 14°≈08'33 0°-44'-33 conjunction -1609 Jan 15 j 22:39 12°₹34'39 0°33'11 -1601 Feb 16 j 15:08 14°≈08'33 minimum elong minimum elong 0°44'34 -1609 Jan 17 j 03:39 12°중38'48 21.09944 AU max. Earth dist. -1601 Feb 17 j 14:36 14°≈11'53 21.11486 AU max. Earth dist. retrograde -1609 May 06 j 00:57 16°る35'22 -1601 Mar 03 j 19:59 15°≈ min. Earth dist. -1609 Jul 22 j 05:02 14° **정**39'15 19.11097 AU retrograde -1601 Jun 07 j 14:45 18°≈09'53 opposition -1609 Jul 23 j 08:02 14°る36'33 0°-37'-46 opposition -1601 Aug 24 j 11:57 16°≈10'24 0°-49'-32 direct -1609 Oct 06 j 23:38 12°₹40'42 min. Earth dist. -1601 Aug 23 j 15:03 16°≈12'30 19.10672 AU

direct

-1608 Jan 20 j 03:13 16°₹32'11 0°-35'-12

conjunction

-1601 Sep 24 j 15:30 15°R≈

-1601 Nov 07 j 11:52 14°≈14'09

Attention, astronomical year style is used: The year -1601 in astronomical counting style is the year 1602 BCE in historical counting style.

-1601 Dec 20 j 03:43 15°≈ direct -1593 Dec 09 j 04:35 16° ★17'04

	-1001 Dec 20 J 05.45	13 \infty		direct	-1393 Dec 09 J 04.33	10 /(1/04	
agnismation	-1600 Feb 20 j 21:18	1000005127	00 45! 5	agnismation	-1592 Mar 24 j 21:26	200¥14120	0°-41'-28
conjunction		18°≈05'37 18°≈05'37	0°-45'-5 0°45'07	conjunction minimum elong	•		0°41'29
minimum elong	-1600 Feb 20 j 21:18			max. Earth dist.	-1592 Mar 24 j 21:26		
max. Earth dist.	-1600 Feb 21 j 18:39		21.09680 AU		-1592 Mar 25 j 04:28		20.78985 AU
retrograde	-1600 Jun 10 j 22:59	22°≈07'18	00 50100	retrograde	-1592 Jul 14 j 04:11		00 451 5
opposition	-1600 Aug 27 j 17:47	20°≈07'44	0°-50'00	opposition	-1592 Sep 28 j 21:02		
min. Earth dist.	-1600 Aug 26 j 22:44	20°≈09'39	19.08670 AU	min. Earth dist.	-1592 Sep 28 j 15:39		18.76076 AU
direct	-1600 Nov 10 j 15:22	18°≈11'23		direct	-1592 Dec 12 j 10:22	20° ★ 22'14	
	1500 E-L 24: 04:00	2200 002117	09 451 24	:	1501 M 20 : 00-25	249 1 2015 (00 40! 1
conjunction	-1599 Feb 24 j 04:08	22°≈03'17	0°-45'-24	conjunction	-1591 Mar 29 j 09:35		0°-40'-1 0°40'02
minimum elong	-1599 Feb 24 j 04:08	22°≈03'17	0°45'26	minimum elong	-1591 Mar 29 j 09:35		
max. Earth dist.	-1599 Feb 25 j 01:23	22°≈06'18	21.07478 AU	max. Earth dist.	-1591 Mar 29 j 15:31		20./3083 AU
retrograde	-1599 Jun 15 j 07:44	26°≈05'22	00.501.15	retrograde	-1591 Jul 18 j 16:15		00 404 00
opposition	-1599 Aug 31 j 23:24	24°≈05'44	0°-50'-15	opposition	-1591 Oct 03 j 04:28		
min. Earth dist.	-1599 Aug 31 j 04:47		19.06254 AU	min. Earth dist.	-1591 Oct 02 j 23:53		18.70010 AU
direct	-1599 Nov 14 j 20:08	22° ≈ 09'17		direct	-1591 Dec 16 j 18:59	24° T 28'41	
agniumation	1500 Eab 20 ; 11:10	26° ≈ 01'44	0°-45'-30	agniumation	1500 Apr 02 i 22:20	28° ¥ 28'33	0°-38'-20
conjunction	-1598 Feb 28 j 11:19			conjunction	-1590 Apr 02 j 22:20	28° X 28'33	0°-38'-20' 0°38'22
minimum elong	-1598 Feb 28 j 11:19	26°≈01'44	0°45'32 21.04861 AU	minimum elong	-1590 Apr 02 j 22:20		20.66882 AU
max. Earth dist.	-1598 Mar 01 j 06:12	20 ≈04 23 0°) {	21.04801 AU	max. Earth dist.	-1590 Apr 03 j 01:23 -1590 Apr 29 j 22:58	28 π 28 39 0° Υ	20.00882 AU
	-1598 Jun 06 j 08:46	0° X 0° X 04'18			-1590 Apr 29 j 22:58 -1590 Jul 23 j 03:03	2° Υ 36'20	
retrograde	-1598 Jun 19 j 15:55			retrograde		0° Y 35'27	00 411 25
• • •	-1598 Jul 02 j 23:28	30°R≈	00 501 15	opposition	-1590 Oct 07 j 12:27		
opposition	-1598 Sep 05 j 05:23	28°≈04'36	0°-50'-15	min. Earth dist.	-1590 Oct 07 j 10:31		18.63692 AU
min. Earth dist.	-1598 Sep 04 j 12:57		19.03422 AU	11	-1590 Oct 21 j 20:43	30° ₹	
direct	-1598 Nov 18 j 23:45	26° ≈ 08'01		direct	-1590 Dec 21 j 01:56	28°) 36′30 0° °	
	1507 Mar. 04 : 10:16	00 W 01107	09 451 24		-1589 Feb 17 j 06:09	O.A.	
conjunction	-1597 Mar 04 j 19:16	0° \ 01'07	0°-45'-24		1500 4 07:12.01	200027120	00.261.20
minimum elong	-1597 Mar 04 j 19:16	0°) €01'07	0°45'26	conjunction	-1589 Apr 07 j 12:01	2° Υ 37'39	0°-36'-28
To all III	-1597 Mar 04 j 11:24	0°) {	21 01006 444	minimum elong	-1589 Apr 07 j 12:01	2° Υ 37'39	0°36'28
max. Earth dist.	-1597 Mar 05 j 13:42		21.01806 AU	max. Earth dist.	-1589 Apr 07 j 13:58		20.60463 AU
retrograde	-1597 Jun 24 j 02:11	4°) (04'12	00.50100	retrograde	-1589 Jul 27 j 16:11	6° Y 46'13	00 201 14
opposition	-1597 Sep 09 j 11:22	2°) (04'27	0°-50'00	opposition	-1589 Oct 11 j 20:44		0°-39'-14
min. Earth dist.	-1597 Sep 08 j 19:45	2°) €06'02	19.00119 AU	min. Earth dist.	-1589 Oct 11 j 19:29	4° Ƴ 45'17	18.57171 AU
**	1 3				•		
min. Earth dist. direct	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18	2° ∺ 06'02 0° ∺ 07'42	19.00119 AU	min. Earth dist. direct	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21	4° Υ 45'17 2° Υ 45'49	18.57171 AU
min. Earth dist. direct conjunction	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54	2° ₭06'02 0° ₭07'42 4° ₭01'33	19.00119 AU 0°-45'-4	min. Earth dist. direct conjunction	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28	4°Υ45'17 2°Υ45'49 6°Υ48'18	18.57171 AU 0°-34'-23
min. Earth dist. direct conjunction minimum elong	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54	2°\06'02 0°\07'42 4°\01'33 4°\01'33	19.00119 AU 0°-45'-4 0°45'04	min. Earth dist. direct conjunction minimum elong	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'18	18.57171 AU 0°-34'-23 0°34'24
min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25	2°\\\06'02 0°\\\07'42 4°\\\01'33 4°\\\01'33 4°\\\03'45	19.00119 AU 0°-45'-4	min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'18	18.57171 AU 0°-34'-23
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38	2°\06'02 0°\07'42 4°\01'33 4°\01'33 4°\03'45 8°\05'12	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'18 6°Y48'11 10°Y57'44	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34	2°\06'02 0°\07'42 4°\01'33 4°\03'45 8°\05'12 6°\05'22	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35	4°Υ45'17 2°Υ45'49 6°Υ48'18 6°Υ48'18 6°Υ48'11 10°Υ57'44 8°Υ56'30	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39	2°\\\06'02 0°\\\07'42 4°\\\01'33 4°\\\01'33 4°\\\03'45 8°\\\05'12 6°\\\05'22 6°\\\06'41	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34	2°\06'02 0°\07'42 4°\01'33 4°\03'45 8°\05'12 6°\05'22	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35	4°Υ45'17 2°Υ45'49 6°Υ48'18 6°Υ48'18 6°Υ48'11 10°Υ57'44 8°Υ56'30	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10	2°\(\)\(06'02\) 0°\(\)\(07'42\) 4°\(\)\(01'33\) 4°\(\)\(03'45\) 8°\(\)\(05'12\) 6°\(\)\(05'22\) 6°\(\)\(06'41\) 4°\(\)\(08'24\)	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 06:59 -1588 Dec 28 j 19:24	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'30	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22	2°\cdot\06'02 0°\cdot\07'42 4°\cdot\01'33 4°\cdot\03'45 8°\cdot\05'12 6°\cdot\05'22 6°\cdot\06'41 4°\cdot\08'24	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 06:59 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22	2°\\\\06'02 0°\\\\07'42 4°\\\\01'33 4°\\\\01'33 4°\\\\03'45 8°\\\\05'12 6°\\\\06'41 4°\\\\08'24 8°\\\\03'05 8°\\\\03'05	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53	2°\\\\06'02 0°\\\\07'42 4°\\\\01'33 4°\\\\01'33 4°\\\\03'45 8°\\\\05'12 6°\\\\05'22 6°\\\\06'41 4°\\\\08'24 8°\\\\03'05 8°\\\\03'05 8°\\\\03'05 8°\\\\03'05	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53 -1595 Jul 01 j 21:45	2°\\\\06'02 0°\\\\07'42 4°\\\\01'33 4°\\\\03'45 8°\\\\05'12 6°\\\\05'22 6°\\\\06'24 4°\\\\08'24 8°\\\\03'05 8°\\\\03'05 8°\\\\03'05 8°\\\\03'05 12°\\\\07'21	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53 -1595 Jul 01 j 21:45 -1595 Sep 17 j 00:00	2°\cdot\06'02 0°\cdot\07'42 4°\cdot\01'33 4°\cdot\03'45 8°\cdot\05'12 6°\cdot\05'22 6°\cdot\06'41 4°\cdot\08'24 8°\cdot\03'05 8°\cdot\03'05 8°\cdot\03'05 8°\cdot\03'05 12°\cdot\07'21 10°\cdot\07'23	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU 0°-48'-47	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01 -1587 Oct 19 j 14:56	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59 13°Y09'37	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU 0°-34'-14
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53 -1595 Jul 01 j 21:45 -1595 Sep 17 j 00:00 -1595 Sep 16 j 12:03	2°\cdot\06'02 0°\cdot\07'42 4°\cdot\01'33 4°\cdot\03'45 8°\cdot\05'12 6°\cdot\05'22 6°\cdot\06'41 4°\cdot\03'05 8°\cdot\03'05 8°\cdot\03'05 8°\cdot\05'09 12°\cdot\07'21 10°\cdot\07'23 10°\cdot\08'37	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01 -1587 Oct 19 j 14:56 -1587 Oct 19 j 16:55	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59 13°Y09'37 13°Y09'25	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53 -1595 Jul 01 j 21:45 -1595 Sep 17 j 00:00	2°\cdot\06'02 0°\cdot\07'42 4°\cdot\01'33 4°\cdot\03'45 8°\cdot\05'12 6°\cdot\05'22 6°\cdot\06'41 4°\cdot\08'24 8°\cdot\03'05 8°\cdot\03'05 8°\cdot\03'05 8°\cdot\03'05 12°\cdot\07'21 10°\cdot\07'23	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU 0°-48'-47	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01 -1587 Oct 19 j 14:56	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59 13°Y09'37	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU 0°-34'-14
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist.	-1597 Sep 08 j 19:45 -1597 Nov 23 j 05:18 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:22 -1595 Mar 13 j 03:53 -1595 Jul 01 j 21:45 -1595 Sep 17 j 00:00 -1595 Sep 16 j 12:03 -1595 Nov 30 j 15:57	2°\06'02 0°\07'42 4°\01'33 4°\03'45 8°\05'12 6°\05'22 6°\06'41 4°\08'24 8°\03'05 8°\03'05 8°\03'05 8°\03'05 8°\03'05 8°\07'21 10°\07'23 10°\07'23 10°\08'37 8°\01'12	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU 0°-48'-47 18.91982 AU	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01 -1587 Oct 19 j 14:56 -1587 Oct 19 j 16:55 -1586 Jan 02 j 06:03	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59 13°Y09'37 13°Y09'32	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU 0°-34'-14 18.43738 AU
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min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. direct conjunction minimum elong min. Earth dist. direct	-1597 Sep 08 j 19:45 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 03:54 -1596 Mar 08 j 19:25 -1596 Jun 27 j 10:38 -1596 Sep 12 j 17:34 -1596 Sep 12 j 04:39 -1596 Nov 26 j 09:10 -1595 Mar 12 j 13:22 -1595 Mar 12 j 13:23 -1595 Jul 01 j 21:45 -1595 Sep 17 j 00:00 -1595 Sep 16 j 12:03 -1595 Nov 30 j 15:57 -1594 Mar 16 j 23:12 -1594 Mar 16 j 23:12 -1594 Mar 17 j 10:34 -1594 Jul 06 j 06:48 -1594 Sep 21 j 06:52 -1594 Sep 20 j 21:42 -1594 Dec 04 j 20:40 -1593 Mar 21 j 10:02 -1593 Mar 21 j 10:02 -1593 Mar 21 j 10:02	2°\\\\06'02 0°\\\\07'42 4°\\\01'33 4°\\\03'45 8°\\\05'12 6°\\\\05'22 6°\\\06'41 4°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05 8°\\\03'05'46 12°\\\07'23 10°\\\07'23 10°\\\07'23 10°\\\07'23 16°\\\10'12 12°\\\05'46 12°\\\07'23 16°\\\10'41 14°\\\11'30 12°\\\13'04 16°\\\09'36 16°\\\09'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36 16°\\\19'36\16°\\\19'36 16	19.00119 AU 0°-45'-4 0°45'04 20.98259 AU 0°-49'-31 18.96318 AU 0°-44'-30 0°44'32 20.94198 AU 0°-48'-47 18.91982 AU 0°-43'-43 0°43'44 20.89604 AU 0°-47'-48 18.87132 AU 0°-42'-42 0°42'44 20.84519 AU 0°-46'-34	min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. direct conjunction minimum elong min. Earth dist. direct	-1589 Oct 11 j 19:29 -1589 Dec 25 j 11:21 -1588 Apr 11 j 02:28 -1588 Apr 11 j 02:28 -1588 Apr 11 j 01:38 -1588 Jul 31 j 04:12 -1588 Oct 15 j 05:35 -1588 Oct 15 j 06:59 -1588 Dec 28 j 19:24 -1587 Apr 15 j 17:50 -1587 Apr 15 j 17:50 -1587 Apr 15 j 15:48 -1587 Aug 04 j 19:01 -1587 Oct 19 j 14:56 -1587 Oct 19 j 16:55 -1586 Apr 20 j 09:53 -1586 Apr 20 j 09:53 -1586 Apr 20 j 09:53 -1586 Aug 09 j 08:27 -1586 Oct 24 j 01:06 -1586 Oct 24 j 01:06 -1585 Apr 25 j 03:10 -1585 Apr 25 j 03:10	4°Y45'17 2°Y45'49 6°Y48'18 6°Y48'18 6°Y48'11 10°Y57'44 8°Y56'30 8°Y56'21 6°Y56'47 11°Y00'41 11°Y00'41 11°Y00'24 15°Y10'59 13°Y09'37 13°Y09'25 11°Y09'32 15°Y14'55 15°Y14'55 15°Y14'55 15°Y14'55 15°Y14'15 19°Y26'07 17°Y24'10 15°Y24'12 19°Y31'07 19°Y31'07 19°Y30'15 23°Y43'15 21°Y41'42	18.57171 AU 0°-34'-23 0°34'24 20.53860 AU 0°-36'-50 18.50504 AU 0°-32'-7 0°32'07 20.47145 AU 0°-34'-14 18.43738 AU 0°-29'-39 0°29'40 20.40339 AU 0°-31'-25 18.36900 AU 0°-27'-1 0°27'02 20.33477 AU 0°-28'-24

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, page 22 Attention, astronomical year style is used: The year -1584 in astronomical counting style is the year 1585 BCE in historical counting style.

Attention, astronomi	ical year style is used: Th	ne year -1584	in astronomical cou	nting style is the year	1585 BCE in historical of	counting style.	
direct	-1584 Jan 11 j 03:15	19° Ƴ 40'53		retrograde	-1578 Sep 14 j 06:39	24° 8 40'46	
				opposition	-1578 Nov 27 j 11:35	22° 8 38'21	0°-3'00
conjunction	-1584 Apr 28 j 21:25		0°-24'-12	min. Earth dist.	-1578 Nov 28 j 06:16		17.80018 AU
minimum elong	-1584 Apr 28 j 21:25		0°24'12	direct	-1577 Feb 10 j 10:56		
max. Earth dist.	-1584 Apr 28 j 12:49		20.26533 AU	max. Earth dist.	-1577 May 31 j 06:50	24° 8 51'00	19.76564 AU
retrograde	-1584 Aug 17 j 16:28						
opposition	-1584 Oct 31 j 23:08		0°-25'-12	conjunction	-1577 Jun 01 j 06:21		
min. Earth dist.	-1584 Nov 01 j 07:26		18.23017 AU	minimum elong	-1577 Jun 01 j 06:21		0°00'54
direct	-1583 Jan 14 j 14:08	23° (7'59'42		behind sun begin	-1577 May 31 j 23:34		
	1502.16 02:16.21	2000000151	00.211.14	behind sun end	-1577 Jun 01 j 13:08		
conjunction	-1583 May 03 j 16:31	28° Y ′09'51 28° Y ′09'51	0°-21'-14	asc. node	-1577 Sep 02 j 14:13		
minimum elong max. Earth dist.	-1583 May 03 j 16:31 -1583 May 03 j 06:00		0°21'15 20.19514 AU	retrograde	-1577 Sep 19 j 02:47 -1577 Dec 02 j 04:10		0000150
max. Earm dist.	-1583 May 03 j 00:00 -1583 Jun 04 j 17:21	0° 8	20.19314 AU	opposition min. Earth dist.	-1577 Dec 02 j 23:36		
retrograde	-1583 Juli 04 j 17.21 -1583 Aug 22 j 10:32	2° 8 23'52		direct	-1576 Feb 15 j 06:32		17.73102 AU
opposition	-1583 Nov 05 j 11:15	0° 8 22'08	0°-21'-50	max. Earth dist.	-1576 Jun 04 j 07:21		19 69829 ATT
min. Earth dist.	-1583 Nov 05 j 20:29		18.15950 AU	max. Lartii dist.	-13/0 Juli 04 J 07.21	2) 0244)	17.07027 AC
mm. Earth dist.	-1583 Nov 14 j 03:26		10.13/30/10	conjunction	-1576 Jun 05 j 07:24	29° H 28'28	0°02'46
direct	-1582 Jan 19 j 03:45	28° Υ 20'36		minimum elong	-1576 Jun 05 j 07:23		0°02'47
	-1582 Mar 23 j 17:42	0°8		behind sun begin	-1576 Jun 05 j 00:37		
		. •		behind sun end	-1576 Jun 05 j 14:10		
conjunction	-1582 May 08 j 12:43	2° 8 32'24	0°-18'-7		-1576 Jun 13 j 22:52	0°II	
minimum elong	-1582 May 08 j 12:43	2° 8 32'24	0°18'06	retrograde	-1576 Sep 22 j 23:08	3° Ⅱ 48'19	
max. Earth dist.	-1582 May 07 j 23:45	2° 8 30'30	20.12391 AU	opposition	-1576 Dec 05 j 21:47	1° Ⅱ 45'39	0°05'00
retrograde	-1582 Aug 27 j 03:24	6° 8 47'21		min. Earth dist.	-1576 Dec 06 j 18:45	1° Ⅱ 43′22	17.66588 AU
opposition	-1582 Nov 10 j 00:14	4° 8 45'31	0°-18'-18		-1575 Jan 23 j 05:29	30°₽ 8	
min. Earth dist.	-1582 Nov 10 j 12:21	4° 8 44'13	18.08789 AU	direct	-1575 Feb 19 j 01:46	29° 8 41'03	
direct	-1581 Jan 23 j 16:48	2° 8 43'33			-1575 Mar 17 j 19:36	Π $^{\circ}0$	
				max. Earth dist.	-1575 Jun 09 j 06:33	4° Ⅱ 00'07	19.63433 AU
conjunction	-1581 May 13 j 09:51	6° 8 57′01	0°-14'-52				
minimum elong	-1581 May 13 j 09:51		0°14'52	conjunction	-1575 Jun 10 j 08:42	4° Ⅱ 04'06	0°06'22
behind sun begin	-1581 May 13 j 07:34	6° 8 56'41		minimum elong	-1575 Jun 10 j 08:41	4° Ⅱ 04'06	0°06'23
behind sun end	-1581 May 13 j 12:08	6° 8 57'21		behind sun begin	-1575 Jun 10 j 02:18	4° Ⅱ 03'09	
max. Earth dist.	-1581 May 12 j 18:28		20.05195 AU	behind sun end	-1575 Jun 10 j 15:05	4° Ⅱ 05'03	
retrograde	-1581 Aug 31 j 22:19	11° 8 12'51		retrograde	-1575 Sep 27 j 20:16	8° ∏ 24'41	
opposition	-1581 Nov 14 j 13:54	9° 8 10'53		opposition	-1575 Dec 10 j 16:05	6° Ⅱ 21'56	
min. Earth dist.	-1581 Nov 15 j 03:00		18.01556 AU	min. Earth dist.	-1575 Dec 11 j 13:35		17.60395 AU
direct	-1580 Jan 28 j 08:30	7° 8 08'30		direct	-1574 Feb 23 j 23:15	4° Ⅱ 16'56	10.57424 444
. ,.	1500 M 17:07.52	110	00 111 20	max. Earth dist.	-1574 Jun 14 j 08:57	8°Щ3/30	19.57434 AU
conjunction	-1580 May 17 j 07:52 -1580 May 17 j 07:52		0°-11'-30 0°11'30	agnismation	1574 Jun 15 : 10:57	8° ∏ 41'29	0°09'55
minimum elong behind sun begin	-1580 May 17 j 07.32 -1580 May 17 j 03:04		0 11 30	conjunction minimum elong	-1574 Jun 15 j 10:57 -1574 Jun 15 j 10:56	8° П 41'29	0°09'57
behind sun begin	-1580 May 17 j 03.04 -1580 May 17 j 12:40			behind sun begin	-1574 Jun 15 j 05:30	8° П 40'41	0 0937
max. Earth dist.	-1580 May 16 j 14:27		19 97930 ATT	behind sun end	-1574 Jun 15 j 16:23	8° П 4041	
max. Earth dist.	-1580 Jul 27 j 07:13		19.91930110	retrograde	-1574 Oct 02 j 17:48	13° I I02'44	
retrograde	-1580 Sep 04 j 16:07			opposition	-1574 Dec 15 j 11:09	10° ∏ 59'57	0°12'58
roundgrade	-1580 Oct 14 j 11:45			min. Earth dist.	-1574 Dec 16 j 09:38		17.54622 AU
opposition	-1580 Nov 18 j 04:25		0°-10'-50	direct	-1573 Feb 28 j 20:19	8° Ⅱ 54'38	
min. Earth dist.	-1580 Nov 18 j 20:08		17.94293 AU	max. Earth dist.	-1573 Jun 19 j 09:39		19.51898 AU
direct	-1579 Jan 31 j 23:50				v		
	-1579 May 07 j 17:46	15° ∀		conjunction	-1573 Jun 20 j 13:39	13° Ⅱ 20′37	0°13'27
max. Earth dist.	-1579 May 21 j 10:45	15° 8 49'07	19.90694 AU	minimum elong	-1573 Jun 20 j 13:38	13° Ⅱ 20′37	0°13'28
				behind sun begin	-1573 Jun 20 j 09:59	13° Ⅱ 20′04	
conjunction	-1579 May 22 j 06:36	15° 8 52'06	0°-8'-3	behind sun end	-1573 Jun 20 j 17:18	13° Ⅲ 21′10	
minimum elong	-1579 May 22 j 06:35	15° 8 52'06	0°08'03	retrograde	-1573 Oct 07 j 16:09	17° Ⅱ 42'31	
behind sun begin	-1579 May 22 j 00:34	15° 8 51'13		opposition	-1573 Dec 20 j 07:07		
behind sun end	-1579 May 22 j 12:37			min. Earth dist.	-1573 Dec 21 j 06:10		17.49336 AU
retrograde	-1579 Sep 09 j 11:38			direct	-1572 Mar 04 j 19:21	13° ∏ 34′08	
opposition	-1579 Nov 22 j 19:33		0°-6'-57				
min. Earth dist.	-1579 Nov 23 j 12:05		17.87095 AU	conjunction	-1572 Jun 24 j 16:55		
direct	-1578 Feb 05 j 17:31	16° 8 04'04	10.00746 : **	minimum elong	·	18° Ⅱ 01'30	0°16'57
max. Earth dist.	-1578 May 26 j 08:59	20° ठ 19'15	19.83540 AU	max. Earth dist.	-1572 Jun 23 j 13:31		19.46849 AU
aanium - ti	1570 M 27 : 06 06	200	00 41 22	retrograde	-1572 Oct 11 j 15:29		0020142
conjunction	-1578 May 27 j 06:06			opposition	-1572 Dec 24 j 03:55		
minimum elong	-1578 May 27 j 06:05 -1578 May 26 j 23:26		0°04'32	min. Earth dist.	-1572 Dec 25 j 03:24 -1571 Mar 09 j 18:34		17.44334 AU
behind sun begin behind sun end	-1578 May 26 j 23:26 -1578 May 27 j 12:44			direct	-15/1 Wiai U9 J 18:34	10 Щ13/20	
ocinnu sun chu	15/6 way 2/ J 12.44	20 023 24					

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1571 in astronomical counting style is the year 1572 BCE in historical counting style. -1571 Jun 29 j 20:35 22° **II** 44'05 0°20'18 direct -1563 Apr 17 j 15:41 26°530'47 conjunction -1571 Jun 29 j 20:34 22°**Ⅱ**44'05 0°20'19 -1563 Jul 22 j 04:16 minimum elong $0^{\circ}\Omega$ -1571 Jun 28 j 15:32 22° **II** 39'35 19.42297 AU -1563 Aug 07 j 06:16 1°**Ω**00'34 19.23070 AU max. Earth dist. max. Earth dist. -1571 Oct 16 j 14:59 27°**Ⅱ**07'09 retrograde -1571 Dec 29 j 01:28 25°**Ⅲ**04'27 0°24'25 -1563 Aug 08 j 09:07 opposition conjunction 1°Ω04'49 0°41'00 0°41'01 -1571 Dec 30 j 01:45 25° **I**I 01'47 17.40240 AU -1563 Aug 08 j 09:07 1°**Ω**04'49 min. Earth dist. minimum elong -1563 Nov 23 j 21:03 direct -1570 Mar 14 j 18:15 22°**Ⅲ**58'27 retrograde 5°**Ω**29'06 max. Earth dist. -1570 Jul 03 j 20:21 27°**Д**23'52 19.38233 AU -1562 Feb 05 j 06:23 opposition 3°**Ω**26'44 0°46'35 min. Earth dist. -1562 Feb 06 j 06:14 3°**\$\Omega**24'08 17.23069 AU conjunction -1570 Jul 05 j 00:49 27°**Ⅲ**28'18 0°23'33 direct -1562 Apr 22 j 19:24 1°**Ω**19'50 minimum elong -1570 Jul 05 j 00:49 27°**Ⅲ**28'18 0°23'35 max. Earth dist. -1562 Aug 12 j 10:26 5°**Ω**49'38 19.23138 AU -1570 Aug 17 j 00:00 0ಂಣ -1570 Oct 21 j 16:24 -1562 Aug 13 j 12:47 5°**Ω**53'49 0°42'28 retrograde 1°**9**51'49 conjunction -1562 Aug 13 j 12:47 -1570 Dec 29 j 21:22 30°RII minimum elong 5°**Ω**53'49 0°42'30 opposition -1569 Jan 02 j 23:53 29°**Ц**49'13 0°27'59 retrograde -1562 Nov 28 j 22:46 $10^{\circ}\Omega$ 17'51 min. Earth dist. -1569 Jan 04 j 00:14 29°**II**46'33 17.36401 AU opposition -1561 Feb 10 j 08:51 8°**Ω**15'32 0°48'03 direct -1569 Mar 19 j 19:27 27°**II**43'03 min. Earth dist. -1561 Feb 11 j 06:38 8°**Ω**13'09 17.23464 AU -1569 Jun 02 j 22:08 0ಂತಾ direct -1561 Apr 28 j 02:05 6°**Ω**08'38 max. Earth dist. -1569 Jul 08 j 23:34 2°509'19 19.34615 AU conjunction -1561 Aug 18 j 16:01 10°**Ω**42'24 0°43'38 conjunction -1569 Jul 10 j 05:21 2°513'58 0°26'41 minimum elong -1561 Aug 18 j 16:01 $10^{\circ}\Omega$ 42'24 $0^{\circ}43'39$ minimum elong -1569 Jul 10 i 05:21 2°9513'58 0°26'43 max. Earth dist. -1561 Aug 17 j 16:13 10° Ω38'38 19.23868 AU retrograde -1569 Oct 26 i 16:26 6°937'53 -1561 Nov 19 i 06:57 $15^{\circ}\Omega$ opposition -1568 Jan 07 i 23:07 4°535'20 0°31'23 retrograde -1561 Dec 03 j 22:21 $15^{\circ}\Omega$ 06'08 min. Earth dist. -1568 Jan 09 j 00:27 4°532'34 17.33023 AU -1561 Dec 18 j 18:59 15°RΩ -1568 Mar 23 j 19:43 2°\$29'00 -1560 Feb 15 i 11:44 13° Ω 03'53 0°49'11 direct opposition max. Earth dist. -1568 Jul 13 j 04:53 6°556'16 19.31459 AU min. Earth dist. -1560 Feb 16 j 08:58 13° Ω 01'35 17.24542 AU direct -1560 May 02 j 06:13 $10^{\circ} \Omega 57'05$ -1568 Jul 14 j 10:10 7°900'51 0°29'38 -1560 Aug 14 j 18:15 15°**Ω** conjunction -1568 Jul 14 j 10:10 minimum elong 7°900'51 0°29'39 -1568 Oct 30 j 19:04 11°525'04 -1560 Aug 22 j 18:36 $15^{\circ}\Omega$ 30'29 $0^{\circ}44'29$ retrograde conjunction -1567 Jan 11 j 23:03 9°522'34 0°34'35 -1560 Aug 22 j 18:36 15°**Ω**30'29 0°44'30 minimum elong opposition -1560 Aug 21 j 19:32 15°**Ω**26'50 19.25309 AU min. Earth dist. -1567 Jan 12 j 23:52 9°519'51 17.30092 AU max. Earth dist. -1560 Dec 07 j 23:39 19° **Ω**53'52 -1567 Mar 28 j 23:05 7°9516'06 direct retrograde -1559 Feb 19 j 14:34 17°**Ω**51'42 0°49'59 -1567 Jul 18 j 09:09 11°544'02 19.28753 AU max. Earth dist. opposition -1559 Feb 20 j 09:27 17° **Ω**49'40 17.26336 AU min. Earth dist. -1567 Jul 19 j 14:55 11°9548'43 0°32'23 -1559 May 07 j 11:28 $15^{\circ}\Omega 45'03$ conjunction direct minimum elong -1567 Jul 19 j 14:55 11°5048'43 0°32'25 -1559 Aug 27 j 20:43 20°**Ω**17'59 0°45'02 retrograde -1567 Nov 04 j 18:39 16°513'08 conjunction opposition -1566 Jan 16 j 23:40 14°510'41 0°37'32 minimum elong -1559 Aug 27 j 20:43 $20^{\circ}\Omega$ 17'59 $0^{\circ}45'04$ min. Earth dist. -1566 Jan 18 j 01:23 14°507'52 17.27631 AU max. Earth dist. -1559 Aug 27 j 00:40 20°**Ω**14'48 19.27448 AU -1566 Apr 03 j 00:27 12°504'04 retrograde -1559 Dec 12 j 23:43 $24^{\circ}\Omega 40'55$ direct -1558 Feb 24 j 17:36 22° **Ω**38'56 0°50'25 opposition -1566 Jul 24 j 19:49 16°537'18 0°34'55 min. Earth dist. -1558 Feb 25 j 11:26 22° **Q**37'00 17.28798 AU conjunction -1566 Jul 24 j 19:48 16°537'18 0°34'56 direct -1558 May 12 j 15:32 20°**Ω**32'30 minimum elong -1566 Jul 23 j 14:24 16°\$32'40 19.26534 AU max. Earth dist. -1566 Nov 09 i 20:56 21°501'49 -1558 Sep 01 j 22:07 $25^{\circ}\Omega$ 04'49 $0^{\circ}45'17$ retrograde conjunction -1565 Jan 22 j 00:34 18°\$59'23 0°40'15 -1558 Sep 01 j 22:07 $25^{\circ}\Omega$ 04'49 $0^{\circ}45'17$ opposition minimum elong -1565 Jan 23 j 01:17 18°556'41 17.25653 AU -1558 Sep 01 j 02:52 25° **Ω**01'46 19.30243 AU min. Earth dist. max. Earth dist. direct -1565 Apr 08 j 05:49 16°552'40 retrograde -1558 Dec 18 j 00:22 $29^{\circ}\Omega$ 27'17 max. Earth dist. -1565 Jul 28 j 19:41 21°521'46 19.24811 AU opposition -1557 Mar 01 j 20:30 $27^{\circ}\Omega 25'27$ 0°50'30 min. Earth dist. -1557 Mar 02 j 12:16 $27^{\circ}\Omega$ 23'46 17.31899 AU -1565 Jul 30 j 00:38 21°\$26'21 0°37'13 direct -1557 May 17 j 19:40 25° **Ω**19'18 conjunction minimum elong -1565 Jul 30 j 00:38 21°526'21 0°37'14 retrograde -1565 Nov 14 j 20:10 25°\$50'52 conjunction -1557 Sep 06 j 23:02 29° Ω 50'53 0°45'13 opposition -1564 Jan 27 j 02:15 23°5548'28 0°42'40 minimum elong -1557 Sep 06 j 23:02 29° Ω 50'53 0°45'14 -1564 Jan 28 j 03:36 23°545'42 17.24207 AU min. Earth dist. max. Earth dist. -1557 Sep 06 j 06:52 29°**Q**48'19 19.33639 AU -1564 Apr 12 j 08:46 21°5541'40 -1557 Sep 09 j 08:32 0° m direct -1564 Aug 02 j 00:29 26°511'05 19.23649 AU -1557 Dec 23 j 00:32 4° Mp 12′47 max. Earth dist. retrograde -1556 Mar 05 j 23:36 2° m 11'10 0°50'15 opposition -1564 Aug 03 j 04:57 26°515'36 0°39'15 conjunction min. Earth dist. -1556 Mar 06 j 13:53 2° Mp 09'38 17.35557 AU minimum elong -1564 Aug 03 j 04:57 26°515'35 0°39'17 direct -1556 May 21 j 23:55 0° Mp 05'20 -1564 Oct 12 j 00:56 0 $^{\circ}$ Ω retrograde -1564 Nov 18 j 22:03 0°**Ω**40′03 conjunction -1556 Sep 10 j 22:57 4° Mp 36'00 0°44'50 -1564 Dec 27 j 16:41 30° RS minimum elong -1556 Sep 10 j 22:57 4° Mp 36'00 0°44'51 -1563 Jan 31 j 04:08 28°\$37'39 0°44'47 -1556 Sep 10 j 07:48 4° mg 33'36 19.37560 AU opposition max. Earth dist. min. Earth dist. -1563 Feb 01 j 03:49 28°535'04 17.23331 AU -1556 Dec 27 j 00:08 8° m 57'20 retrograde

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1555 in astronomical counting style is the year 1556 BCE in historical counting style. -1555 Mar 11 i 02:31 6° m 55'53 0°49'39 opposition -1547 Apr 18 j 11:51 13° **2**56'44 0°33'59 opposition min. Earth dist. -1555 Mar 11 j 15:04 6° M 54'32 17.39722 AU min. Earth dist. -1547 Apr 18 j 09:13 13°**2**57'00 17.84825 AU -1555 May 27 j 03:20 4° m 50'22 -1547 Jul 04 j 17:33 11°**2**54'00 direct direct -1555 Sep 15 j 22:24 9° m/20'02 0°44'09 -1547 Oct 22 j 07:58 16° 12'00 0°29'14 conjunction conjunction -1555 Sep 15 j 22:24 9°m 20'02 0°44'09 -1547 Oct 22 j 07:58 16° **2**12'00 0°29'13 minimum elong minimum elong -1547 Oct 22 j 11:52 16°**£**12'36 19.88235 AU -1555 Sep 15 j 10:02 9°**m**) 18'05 max. Earth dist. 19.41949 AU max. Earth dist. -1546 Feb 06 j 14:18 20°**£**25'50 retrograde -1555 Dec 31 j 23:31 13° m 40'41 retrograde opposition -1554 Mar 16 j 05:06 11° m 39'25 0°48'42 opposition -1546 Apr 23 j 10:02 18°**♀**25'22 0°30'58 min. Earth dist. -1554 Mar 16 j 15:48 11° Mp 38'16 17.44302 AU min. Earth dist. -1546 Apr 23 j 04:04 18° **2**25'59 17.91679 AU direct -1554 Jun 01 j 07:46 9°My34'16 direct -1546 Jul 09 j 16:24 16°**2**23'01 -1554 Sep 20 j 20:58 14° mg 02'47 0°43'10 -1546 Oct 26 j 22:51 20°**♀**39'23 conjunction conjunction 0°26'28 minimum elong -1554 Sep 20 j 20:58 14° mg 02'47 0°43'11 minimum elong -1546 Oct 26 j 22:51 20°**♀**39'23 0°26'26 max. Earth dist. -1554 Sep 20 j 09:46 14° mg 01'01 19.46723 AU max. Earth dist. -1546 Oct 27 j 05:40 20°**♀**40'26 19.95210 AU retrograde -1553 Jan 05 j 21:36 18° Mp 22'44 retrograde -1545 Feb 11 j 06:08 24° **2**52'19 opposition -1553 Mar 21 j 07:38 16° m 21'35 0°47'27 opposition -1545 Apr 28 j 07:53 22°**♀**51'59 min. Earth dist. -1553 Mar 21 j 16:55 16° Mp 20'36 17.49258 AU min. Earth dist. -1545 Apr 28 j 00:40 22°**♀**52'44 17.98767 AU direct -1553 Jun 06 j 10:34 14° mp 16'47 direct -1545 Jul 14 j 11:38 20° **2**50'06 conjunction -1553 Sep 25 j 18:37 18° mp 44'03 0°41'54 conjunction -1545 Oct 31 j 12:39 25°**£**04'47 0°23'33 minimum elong -1553 Sep 25 j 18:37 18° mp 44'03 0°41'54 minimum elong -1545 Oct 31 j 12:39 25°**£**04'47 0°23'32 max. Earth dist. -1553 Sep 25 j 09:55 18° m 42'41 19.51845 AU max. Earth dist. -1545 Oct 31 j 21:04 25° \(\Omega\) 06'04 20.02403 AU retrograde -1552 Jan 10 j 19:37 23° m 03'13 retrograde -1544 Feb 16 i 00:13 29° **2**16'50 opposition -1552 Mar 25 i 09:46 21° m 02'13 0°45'52 opposition -1544 May 02 j 04:50 27° **2**16'39 0°24'29 min. Earth dist. -1552 Mar 25 j 16:38 21° mp 01'30 17.54517 AU min. Earth dist. -1544 May 01 j 18:26 27° **2**17'43 18.06033 AU -1552 Jun 10 j 15:12 18° M 57'47 direct -1544 Jul 18 j 08:50 25°**2**15'12 direct -1552 Sep 29 j 15:24 23° m 23'39 0°40'22 -1544 Nov 04 j 01:49 29° **2**28'17 0°20'31 conjunction conjunction -1544 Nov 04 j 01:49 29°**2**28'17 0°20'31 -1552 Sep 29 j 15:24 23° m 23'39 minimum elong minimum elong 0°40'23 -1552 Sep 29 j 08:18 23° m/22'33 max. Earth dist. -1544 Nov 04 j 13:11 29° **2**30'00 20.09723 AU max. Earth dist. 19.57252 AU -1551 Jan 14 j 15:45 27° m 42'02 -1544 Nov 12 j 17:49 retrograde 0°M -1551 Mar 30 j 11:21 25° m 41'07 0°43'59 -1543 Feb 19 j 15:06 opposition retrograde 3°M39'26 -1551 Mar 30 j 17:05 25° m 40'31 17.60067 AU min. Earth dist. -1543 May 07 j 01:02 opposition 1°M39'25 0°21'03 -1551 Jun 15 j 16:39 23° M 37'01 min. Earth dist. -1543 May 06 j 13:41 direct 1°M40'34 18.13394 AU -1543 Jun 23 j 12:19 30°R € -1551 Oct 04 j 11:11 28° m 01'27 0°38'34 -1543 Jul 23 j 02:36 29°**♀**38'27 conjunction direct minimum elong -1551 Oct 04 j 11:11 28° m 01'27 0°38'34 -1543 Aug 21 j 03:16 $0^{\circ}M$ max. Earth dist. -1551 Oct 04 j 06:16 28° m 00'40 19.62937 AU -1551 Nov 06 j 03:50 0∘**ত** conjunction -1543 Nov 08 j 14:05 3°M49'53 0°17'24 retrograde -1550 Jan 19 j 12:22 2°**2**18'56 minimum elong -1543 Nov 08 j 14:05 3°M49'53 0°17'23 -1550 Apr 04 j 12:21 0°**2**18'08 0°41'51 max. Earth dist. -1543 Nov 09 j 02:31 3°M51'46 20.17109 AU opposition min. Earth dist. -1550 Apr 04 j 15:19 0°**2**17'50 17.65861 AU retrograde -1542 Feb 24 j 07:34 8°ML00'11 -1550 Apr 11 j 17:58 30°R Mp -1542 May 11 j 20:30 6°M00'19 0°17'31 opposition direct -1550 Jun 20 j 19:50 28° Mp 14'21 min. Earth dist. -1542 May 11 j 06:26 6°ML01'45 18.20779 AU -1542 Jul 27 i 22:05 3°M59'49 -1550 Aug 25 i 06:24 0∘**⊽** direct -1550 Oct 09 i 05:56 -1542 Nov 13 i 01:37 8°M09'39 0°14'12 conjunction 2°**♀**37'15 0°36'32 conjunction minimum elong -1550 Oct 09 i 05:56 2°**♀**37'15 0°36'32 minimum elong -1542 Nov 13 i 01:37 8°M09'39 0°14'11 max. Earth dist. -1550 Oct 09 i 03:09 2°**△**36'49 19.68858 AU behind sun begin -1542 Nov 12 i 22:17 8°ML09'10 retrograde -1549 Jan 24 j 06:46 6°**£**53'51 behind sun end -1542 Nov 13 i 04:57 8°M10'09 opposition -1549 Apr 09 i 12:53 4°**£**53'07 0°39'27 max. Earth dist. -1542 Nov 13 j 16:50 8°M11'57 20.24464 AU 4°**£**52'56 17.71914 AU min. Earth dist. -1549 Apr 09 j 14:44 retrograde -1541 Feb 28 j 21:27 12°ML19'07 -1549 Jun 25 j 19:27 direct 2°**£**49'40 opposition -1541 May 16 j 15:26 10°M 19'24 0°13'54 min. Earth dist. -1541 May 16 j 00:32 10°M20'55 18.28098 AU conjunction -1549 Oct 13 j 23:37 7°**♀**10'58 0°34'17 direct -1541 Aug 01 j 14:58 8°M19'21 minimum elong -1549 Oct 13 j 23:37 7°**£**10'58 0°34'17 -1549 Oct 13 j 22:57 7°**♀**10'52 19.75050 AU -1541 Nov 17 j 12:24 12°M27'36 0°10'56 max. Earth dist. conjunction retrograde -1548 Jan 29 j 02:21 11°**≏**26'39 -1541 Nov 17 j 12:24 12°M27'36 minimum elong 0°10'54 -1548 Apr 13 j 12:39 -1541 Nov 17 j 07:23 12°M26'52 opposition 9°**£**25'59 0°36'49 behind sun begin -1541 Nov 17 j 17:25 12°M28'20 min. Earth dist. -1548 Apr 13 j 11:15 9°**£**26'08 17.78231 AU behind sun end direct -1548 Jun 29 j 20:28 7°**£**22'53 max. Earth dist. -1541 Nov 18 j 04:18 12°M29'59 20.31730 AU -1540 Jan 01 j 17:49 15°M conjunction -1548 Oct 17 j 16:16 11°**2**42'33 0°31'51 retrograde -1540 Mar 04 j 12:23 16°M36'15 minimum elong -1548 Oct 17 j 16:16 11°**2**42'33 0°31'50 -1540 May 10 j 17:45 15°RML max. Earth dist. -1548 Oct 17 j 18:19 11°**2**42'52 19.81502 AU -1540 May 20 j 09:25 14°M36'40 0°10'14 opposition retrograde -1547 Feb 01 j 19:22 15°**2**57'19 min. Earth dist. -1540 May 19 j 16:17 14°M38'24 18.35295 AU Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, page 25

•	nical year style is used: The			` //			age 23
direct	-1540 Aug 05 j 08:08	-	in astronomical cot	conjunction	-1534 Dec 15 j 21:29		
uncet	-1540 Oct 22 i 06:59			minimum elong	-1534 Dec 15 j 21:29		0°12'07
	-1340 Oct 22 j 00.37	13 110		behind sun begin	-1534 Dec 15 j 16:59		0 12 07
conjunction	-1540 Nov 20 j 22:37	16°M.43'45	0°07'38	behind sun end	-1534 Dec 16 j 01:59		
minimum elong	-1540 Nov 20 j 22:37	16°M43'45		max. Earth dist.	-1534 Dec 16 j 23:00		20.75865 AU
behind sun begin	-1540 Nov 20 j 16:40	16°M42'52	0 07 37	retrograde	-1533 Apr 03 j 18:58		20.73003710
behind sun end	-1540 Nov 21 j 04:34	16°M44'37		opposition	-1533 Jun 20 j 17:11		0°-15'-3
max. Earth dist.	-1540 Nov 21 j 16:56		20.38820 AU	min. Earth dist.	-1533 Jun 19 j 16:23		
retrograde	-1539 Mar 09 j 01:10	20°M51'35	20.50020 110	direct	-1533 Sep 05 j 04:56		10.70207110
min. Earth dist.	-1539 May 24 j 08:56		18.42275 AU	direct	1333 Бер 03 ј 04.30	11 7 47 33	
opposition	-1539 May 25 j 02:44	18°M52'06		conjunction	-1533 Dec 20 j 03:19	15° √ 146'55	0°-15'-8
direct	-1539 Aug 09 j 23:55		0 00 33	minimum elong	-1533 Dec 20 j 03:19		0°15'10
uncet	-1337 Aug 07 J 23.33	10 1103231		behind sun begin	-1533 Dec 20 j 00:53		0 13 10
conjunction	-1539 Nov 25 j 08:01	20°M58'04	0°04'19	behind sun end	-1533 Dec 20 j 05:44		
minimum elong	-1539 Nov 25 j 08:01	20°M58'04		max. Earth dist.	-1533 Dec 20 j 05:44 -1533 Dec 21 j 04:45		20 81180 AII
behind sun begin	-1539 Nov 25 j 01:35	20°M57'08	0 0417	retrograde	-1532 Apr 07 j 05:10		20.01100 AC
behind sun end	-1539 Nov 25 j 14:26			min. Earth dist.	-1532 Apr 07 j 03:10 -1532 Jun 23 j 03:05		19 93777 ATT
max. Earth dist.	-1539 Nov 26 j 02:32		20.45676 AU	opposition	-1532 Jun 24 j 04:47		
retrograde	-1538 Mar 13 j 14:20	25°M05'08	20.43070 AC	direct	-1532 Sep 08 j 13:39		0 -18 -24
opposition	-1538 May 29 j 19:09	23°ML05'44	0°02'50	direct	-1332 Sep 06 J 13.39	13 X 33 27	
min. Earth dist.	-1538 May 28 j 23:34			conjunction	-1532 Dec 23 j 08:52	100.7/40147	0°-18'-6
			16.49001 AU	minimum elong			0°18'09
direct	-1538 Aug 14 j 14:57	21 11600 49		_	-1532 Dec 23 j 08:52		
	1520 N 20 : 16.55	250M 10125	0000157	max. Earth dist.	-1532 Dec 24 j 12:18		20.86249 AU
conjunction	-1538 Nov 29 j 16:55			retrograde	-1531 Apr 11 j 13:04		09 211 27
minimum elong	-1538 Nov 29 j 16:55		0°00'55	opposition	-1531 Jun 28 j 15:46		0°-21'-37
behind sun begin	-1538 Nov 29 j 10:24			min. Earth dist.	-1531 Jun 27 j 13:16		18.88706 AU
behind sun end	-1538 Nov 29 j 23:27		20.52254.433	direct	-1531 Sep 12 j 22:46	19° × ′56′09	
max. Earth dist.	-1538 Nov 30 j 13:41		20.52254 AU		1521 D 27:12.52	220 751122	00 201 50
desc. node	-1537 Mar 10 j 07:25	29°M15'21		conjunction	-1531 Dec 27 j 13:52		0°-20'-59
retrograde	-1537 Mar 18 j 01:57			minimum elong	-1531 Dec 27 j 13:52		
opposition	-1537 Jun 03 j 10:54			max. Earth dist.	-1531 Dec 28 j 17:00		20.91033 AU
min. Earth dist.	-1537 Jun 02 j 14:36		18.55436 AU	retrograde	-1530 Apr 15 j 22:27		
direct	-1537 Aug 19 j 05:30	25°IIL18'56		min. Earth dist.	-1530 Jul 01 j 23:17		
				opposition	-1530 Jul 03 j 02:15		0°-24'-44
conjunction	-1537 Dec 04 j 00:54			direct	-1530 Sep 17 j 05:39	23° × 157'50	
minimum elong	-1537 Dec 04 j 00:53		0°02'30				
behind sun begin	-1537 Dec 03 j 18:22			conjunction	-1530 Dec 31 j 18:54		0°-23'-44
behind sun end	-1537 Dec 04 j 07:24			minimum elong	-1530 Dec 31 j 18:54		0°23'47
max. Earth dist.	-1537 Dec 04 j 21:47		20.58549 AU	max. Earth dist.	-1529 Jan 01 j 23:44		20.95492 AU
	-1537 Dec 14 j 22:45	0° ∡ ¹			-1529 Feb 08 j 10:41	0°ਰ	
retrograde	-1536 Mar 21 j 13:38	3° ∡ ¹26'49		retrograde	-1529 Apr 20 j 06:30	1°る54'09	
min. Earth dist.	-1536 Jun 06 j 03:59		18.61596 AU		-1529 Jul 05 j 11:32		
opposition	-1536 Jun 07 j 01:44	1° ∡ ¹27'29	0°-4'-29	min. Earth dist.	-1529 Jul 06 j 08:39		18.97616 AU
	-1536 Jul 17 j 20:25	30°RM₊		opposition	-1529 Jul 07 j 12:07		0°-27'-43
direct	-1536 Aug 22 j 18:30	29°M29'10		direct	-1529 Sep 21 j 13:56		
	-1536 Sep 26 j 14:07	0° ∡ ¹			-1529 Dec 02 j 05:47	0°ಕ	
		=					
conjunction	-1536 Dec 07 j 08:28	3° ∡ ³30′08	0°-5'-44	conjunction	-1528 Jan 04 j 23:36	1° る 52'24	
minimum elong	-1536 Dec 07 j 08:27	3° ∡ ¹30′08	0°05'47	minimum elong	-1528 Jan 04 j 23:36	1°る52'24	0°26'26
behind sun begin	-1536 Dec 07 j 02:11	3° ∡ ¹29'14 −		max. Earth dist.	-1528 Jan 06 j 03:42		20.99571 AU
behind sun end	-1536 Dec 07 j 14:43	3° ∡ ³31′02		retrograde	-1528 Apr 23 j 15:23	5° 云 53'53	
max. Earth dist.	-1536 Dec 08 j 07:34	3° ∡ ³33'32	20.64563 AU	opposition	-1528 Jul 10 j 21:34	3° る 54'57	
retrograde	-1535 Mar 25 j 23:37	7° ∡ ³34'58		min. Earth dist.	-1528 Jul 09 j 18:15		19.01490 AU
opposition	-1535 Jun 11 j 15:33	5° ∡ ³35'40		direct	-1528 Sep 24 j 19:20	1° る 58'37	
min. Earth dist.	-1535 Jun 10 j 17:02		18.67481 AU				
direct	-1535 Aug 27 j 07:19	3° ∡ ³37'36		conjunction	-1527 Jan 08 j 04:27	5° る 51'44	
				minimum elong	-1527 Jan 08 j 04:27	5° る 51'44	
conjunction	-1535 Dec 11 j 15:13	7° ∡ ³37'16		max. Earth dist.	-1527 Jan 09 j 09:45		21.03206 AU
minimum elong	-1535 Dec 11 j 15:13	7° ∡ ³37'16	0°08'58	retrograde	-1527 Apr 27 j 23:20	9° ප 52'56	
behind sun begin	-1535 Dec 11 j 09:36	7° ∡ ³36′28		min. Earth dist.	-1527 Jul 14 j 02:54		19.04879 AU
behind sun end	-1535 Dec 11 j 20:51	7° ∡ ³38'05		opposition	-1527 Jul 15 j 06:18	7° る 54'04	0°-33'-15
max. Earth dist.	-1535 Dec 12 j 14:25	7° ∡ ¹40'41	20.70328 AU	direct	-1527 Sep 29 j 02:55	5° る 57'55	
retrograde	-1534 Mar 30 j 10:20	11° ∡ ¹41'27					
min. Earth dist.	-1534 Jun 15 j 04:55		18.73143 AU	conjunction	-1526 Jan 12 j 09:05	9° る 50'27	0°-31'-15
opposition	-1534 Jun 16 j 04:44	9° ∡ ¹42'10	0°-11'-37	minimum elong	-1526 Jan 12 j 09:05	9° る 50'27	0°31'18
direct	-1534 Aug 31 j 18:07	7° ∡¹ 44'20		max. Earth dist.	-1526 Jan 13 j 13:07		21.06341 AU
				retrograde	-1526 May 02 j 07:56	13° る 51'27	

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1526 in astronomical counting style is the year 1527 BCE in historical counting style. -1526 Jul 19 j 14:53 11°정52'36 0°-35'-46 -1518 Jun 03 i 20:39 15°≈25'36 retrograde opposition min. Earth dist. -1526 Jul 18 j 12:07 11°る55'16 19.07755 AU -1518 Jul 07 j 02:35 15°R≈ -1526 Oct 03 j 07:56 9°**る**56'35 opposition -1518 Aug 20 j 21:05 13°≈26'09 0°-48'-51 direct -1518 Aug 19 j 23:36 13°≈28'19 19.11758 AU min. Earth dist. -1525 Jan 16 j 13:48 13°₹48'36 0°-33'-27 -1518 Nov 03 j 21:47 11°≈29'57 conjunction direct -1525 Jan 16 j 13:48 13°₹48'36 -1517 Feb 11 j 01:10 15°≈ minimum elong 0°33'29 -1525 Jan 17 j 18:37 13°**궁**52'44 21.08927 AU max. Earth dist. -1525 May 06 j 15:43 17°₹49'26 -1517 Feb 17 j 05:59 15°≈21'07 0°-44'-33 retrograde conjunction -1517 Feb 17 j 05:59 15°≈21'07 0°44'35 -1525 Jul 23 j 22:57 15°る50'34 0°-38'-7 opposition minimum elong -1517 Feb 18 j 05:54 15°≈24'30 21.11041 AU min. Earth dist. -1525 Jul 22 j 20:15 15°중53'14 19.10048 AU max. Earth dist. direct -1525 Oct 07 j 14:35 13°**궁**54'39 retrograde -1517 Jun 08 j 05:30 19°≈22'28 -1517 Aug 24 j 05:40 17°≈25'07 19.10310 AU min. Earth dist. -1524 Jan 20 j 18:29 17°₹46'13 0°-35'-30 -1517 Aug 25 j 02:49 17°≈22'58 conjunction opposition 0°-49'-31 minimum elong -1524 Jan 20 j 18:29 17°**정**46'13 0°35'32 direct -1517 Nov 08 j 02:52 15°≈26'44 max. Earth dist. -1524 Jan 21 j 21:39 17°**궁**50'06 21.10931 AU retrograde -1524 May 09 j 23:51 21°**⋜**46'55 conjunction -1516 Feb 21 j 12:12 19°≈18'15 0°-45'-2 min. Earth dist. -1524 Jul 26 j 04:54 19°**궁**50'33 19.11766 AU minimum elong -1516 Feb 21 j 12:12 19°≈18'15 0°45'04 opposition -1524 Jul 27 j 06:32 19°₹48'00 0°-40'-16 max. Earth dist. -1516 Feb 22 j 09:55 19°≈21'19 21.09398 AU direct -1524 Oct 10 j 19:32 17°る52'05 retrograde -1516 Jun 11 j 13:26 23°≈19'59 opposition -1516 Aug 28 j 08:32 21°≈20′26 conjunction -1523 Jan 23 j 23:18 21°₹43'19 0°-37'-22 min. Earth dist. -1516 Aug 27 j 13:15 21°≈22'23 19.08461 AU minimum elong -1523 Jan 23 j 23:18 21°**ප්**43'19 0°37'23 direct -1516 Nov 11 i 05:25 19°≈24'06 max. Earth dist. -1523 Jan 25 i 02:59 21°**5**47′16 21.12359 AU retrograde -1523 May 14 i 07:12 25° ₹43'54 conjunction -1515 Feb 24 i 19:06 23°≈16'06 0°-45'-19 -1523 Jul 31 j 13:41 23°정44'55 0°-42'-14 opposition minimum elong -1515 Feb 24 j 19:06 23°≈16'06 0°45'22 min. Earth dist. -1523 Jul 30 j 12:12 23°정47'28 19.12910 AU max. Earth dist. -1515 Feb 25 j 16:41 23°≈19'10 21.07336 AU -1523 Oct 15 j 01:11 21°₹49'00 retrograde -1515 Jun 15 j 22:38 27°≈18'15 direct -1515 Sep 01 j 14:18 25°≈18'41 0°-50'-8 opposition -1522 Jan 28 j 03:48 25°る39'57 0°-39'-3 -1515 Aug 31 j 19:36 25°≈20'35 19.06167 AU conjunction min. Earth dist. -1522 Jan 28 j 03:48 25° ₹39'57 0°39'05 -1515 Nov 15 j 10:41 23°≈22'17 direct minimum elong -1522 Jan 29 j 05:53 25°정43'40 21.13244 AU max. Earth dist. -1514 Mar 01 j 02:15 27°≈14'49 0°-45'-23 -1522 May 18 j 14:40 29°る40'31 retrograde conjunction -1522 Aug 04 j 20:37 27°る41'24 0°-43'-59 -1514 Mar 01 j 02:15 27°≈14'49 0°45'25 opposition minimum elong -1522 Aug 03 j 20:13 27°る43'50 19.13549 AU -1514 Mar 01 j 21:18 27°≈17'32 21.04819 AU min. Earth dist. max. Earth dist. -1522 Oct 19 j 05:42 25°**3**45'27 -1514 Apr 23 j 06:16 0°**米** direct -1514 Jun 20 j 07:47 retrograde 1°**米**17'29 -1521 Feb 01 j 08:41 29°**궁**36'13 0°-40'-32 -1514 Aug 19 j 04:26 30°R≈ conjunction minimum elong -1521 Feb 01 j 08:41 29°**궁**36'13 0°40'35 opposition -1514 Sep 05 j 20:22 29°≈17'51 0°-50'-6 max. Earth dist. -1521 Feb 02 j 11:24 29°정40'01 21.13642 AU min. Earth dist. -1514 Sep 05 j 03:53 29°≈19'32 19.03411 AU -1521 Feb 08 j 07:47 direct -1514 Nov 19 j 14:05 27°≈21'19 0°**≈** retrograde -1521 May 22 j 22:08 3°≈36'48 -1513 Feb 11 j 06:18 0°**)**€ min. Earth dist. -1521 Aug 08 j 02:41 1°≈40'01 19.13718 AU -1521 Aug 09 j 03:00 1°≈37'35 0°-45'-32 conjunction -1513 Mar 05 j 10:25 1°**)** 14'31 0°-45'-14 opposition -1521 Sep 26 j 04:38 30°R ₹ minimum elong -1513 Mar 05 j 10:25 1°**¥**14'31 0°45'15 direct -1521 Oct 23 j 10:47 29°₹41'35 max. Earth dist. -1513 Mar 06 j 04:52 1°**₭**17'09 21.01812 AU -1521 Nov 19 i 06:14 -1513 Jun 24 i 17:09 5°**)** 17'41 0°≈ retrograde -1513 Sep 09 i 10:48 3°**¥**19'35 19.00135 AU min. Earth dist. -1520 Feb 05 i 13:34 3°**)** 18'00 0°-49'-49 conjunction 3°≈32'17 0°-41'-50 opposition -1513 Sep 10 j 02:20 -1520 Feb 05 i 13:34 minimum elong 3°≈32'17 0°41'52 direct -1513 Nov 23 j 19:40 1°**)** 21'18 max. Earth dist. -1520 Feb 06 i 14:35 3°≈35'50 21.13597 AU conjunction retrograde -1520 May 26 j 05:20 7°≈32'57 -1512 Mar 08 i 19:06 5°\ 15'13 0°-44'-52 min. Earth dist. -1520 Aug 11 j 10:13 5°≈35'57 19.13467 AU minimum elong -1512 Mar 08 i 19:07 5°¥15'13 0°44'54 -1520 Aug 12 j 09:16 5°≈33'38 0°-46'-51 max. Earth dist. -1512 Mar 09 j 10:27 5°**升**17'24 20.98273 AU opposition -1520 Oct 26 j 14:17 -1512 Jun 28 j 03:00 direct 3°≈37'34 retrograde 9°**升**18'57 opposition -1512 Sep 13 j 08:43 7°**)** 19'09 0°-49'-16 -1512 Sep 12 j 19:45 conjunction -1519 Feb 08 j 18:48 7°≈28'19 0°-42'-57 min. Earth dist. 7°**升**20′28 18.96326 AU minimum elong -1519 Feb 08 j 18:48 7°≈28'19 0°42'59 direct -1512 Nov 27 j 00:15 5°**¥**22'14 -1519 Feb 09 j 20:17 7°**≈**31'57 21.13135 AU max. Earth dist. retrograde -1519 May 30 j 13:20 11°≈29'08 conjunction -1511 Mar 13 j 04:28 9°\;\;\\16'57\ 0°-44'-16 -1519 Aug 16 j 15:07 9°≈29'46 0°-47'-58 -1511 Mar 13 j 04:28 9°**)** 16'57 0°44'16 opposition minimum elong -1519 Aug 15 j 16:12 -1511 Mar 13 j 18:54 9° **★**19'00 20.94195 AU min. Earth dist. 9°≈32'04 19.12801 AU max. Earth dist. -1519 Oct 30 j 19:13 direct 7°≈33'38 retrograde -1511 Jul 02 j 12:38 13°**∺**21'14 opposition -1511 Sep 17 j 15:09 11°**∺**21'18 0°-48'-30 conjunction -1518 Feb 13 j 00:09 11°≈24'32 0°-43'-51 min. Earth dist. -1511 Sep 17 j 03:08 11°**米**22'32 18.91974 AU minimum elong -1518 Feb 13 j 00:09 11°≈24'32 0°43'52 direct -1511 Dec 01 j 06:33 9°**)** 24'07 max. Earth dist. -1518 Feb 13 j 23:47 11°≈27'53 21.12281 AU -1518 May 02 j 02:02 15°≈ -1510 Mar 17 j 14:20 13° **¥** 19'41 0°-43'-26 conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1510 in astronomical counting style is the year 1511 BCE in historical counting style. -1510 Mar 17 j 14:20 13° **升** 19'41 0°43'28 minimum elong -1502 Apr 21 j 00:12 16° \begin{pmatrix} \gamma 27'06 & 0\circ 29'11 \end{pmatrix} minimum elong -1510 Mar 18 j 01:39 13° \(\frac{1}{2}\)1'18 20.89604 AU max. Earth dist. -1502 Apr 20 j 19:56 16°Υ26'29 20.41474 AU max Earth dist -1510 Jul 06 j 22:19 17° **€** 24'35 -1502 Aug 09 j 23:03 20°**Υ**38'11 retrograde retrograde -1502 Oct 24 j 15:41 18°**Υ**36'47 -1510 Sep 21 j 21:53 15° **★**24'28 0°-47'-28 0°-30'-51 opposition opposition -1510 Sep 21 j 12:32 15°**米**25'25 18.87147 AU -1502 Oct 24 j 20:07 18°**Υ**36'19 18.38085 AU min. Earth dist. min. Earth dist. -1510 Dec 05 j 12:15 13°**∺**26'58 -1501 Jan 07 j 05:37 16°**Y**36'26 direct direct -1509 Mar 22 j 01:02 17°**米**23'28 0°-42'-23 -1501 Apr 25 j 17:31 20°**Y**43'12 0°-26'-30 conjunction conjunction -1501 Apr 25 j 17:31 20°**Y**43'12 0°26'31 minimum elong -1509 Mar 22 j 01:02 17°**米**23'28 0°42'24 minimum elong max. Earth dist. -1509 Mar 22 j 11:25 17° **★**24'57 20.84562 AU max. Earth dist. -1501 Apr 25 j 11:43 20°**Υ**42'22 20.34696 AU retrograde -1509 Jul 11 j 08:58 21° **★** 28'59 retrograde -1501 Aug 14 j 15:41 24° Υ 55'13 -1501 Oct 29 j 02:19 22°Υ'53'45 0°-27'-49 opposition -1509 Sep 26 j 04:42 19°**∺**28'40 0°-46'-12 opposition -1501 Oct 29 j 07:42 22° Υ 53'11 18.31231 AU min. Earth dist. -1509 Sep 25 j 20:19 19° **★**29'32 18.81887 AU min. Earth dist. direct -1509 Dec 09 j 19:28 17° **∺** 30'50 direct -1500 Jan 11 j 17:57 20°**Y**53'03 conjunction -1508 Mar 25 j 12:16 21° **∺**28'19 0°-41'-7 conjunction -1500 Apr 29 j 11:43 25°**Y**01'26 0°-23'-40 minimum elong -1508 Mar 25 j 12:16 21°**米**28'19 0°41'08 minimum elong -1500 Apr 29 j 11:43 25°**Y**01'26 0°23'41 max. Earth dist. -1508 Mar 25 j 19:36 21° **∺**29'22 20.79117 AU max. Earth dist. -1500 Apr 29 j 03:01 25° Υ 00'10 20.27763 AU retrograde -1508 Jul 14 j 18:43 25° ¥ 34'31 retrograde -1500 Aug 18 j 06:36 29°Υ 14'23 opposition -1508 Sep 29 j 11:49 23° ¥ 34'00 0°-44'-41 opposition -1500 Nov 01 j 13:48 27°**Υ**12'50 0°-24'-36 min. Earth dist. -1508 Sep 29 j 06:06 23° \(\) 34'35 18.76274 AU min. Earth dist. -1500 Nov 01 j 22:07 27°Υ 11'57 18.24231 AU -1508 Dec 13 j 01:41 21°**)** € 35'47 direct direct -1499 Jan 15 i 04:44 25°**Υ**11'47 conjunction -1507 Mar 30 i 00:18 25°**)** (34'22 0°-39'-38 conjunction -1499 May 04 i 06:56 29° **Y**21'47 0°-20'-41 -1507 Mar 30 j 00:18 25° \(\mathbf{X}\) 34'22 0°39'39 minimum elong $-1499 \text{ May } 04 \text{ i } 06:56 \quad 29^{\circ} \mathbf{Y}^{2}1'47 \quad 0^{\circ} 20'40$ minimum elong -1507 Mar 30 j 06:46 25° + 35'18 20.73355 AU max. Earth dist. -1499 May 03 j 20:19 29°**Υ**20'13 20.20695 AU max. Earth dist. -1507 Jul 19 j 06:38 29° **)** 41'16 -1499 May 15 j 02:22 retrograde 0° 8 -1507 Oct 03 j 19:13 27° ¥40'33 0°-42'-56 retrograde -1499 Aug 23 j 00:55 3°**8**35'41 opposition -1507 Oct 03 j 14:16 27°**)** 41'03 18.70366 AU -1499 Nov 06 j 01:54 1°**8**34'01 0°-21'-12 min. Earth dist. opposition -1507 Dec 17 j 09:58 25° ¥41'58 min. Earth dist. -1499 Nov 06 j 11:11 direct 1°**8**33'02 18.17090 AU -1499 Dec 18 j 01:36 30°R℃ -1498 Jan 19 j 19:02 29°**Y**32'34 -1506 Apr 03 j 12:49 29° **H**41'43 0°-37'-56 conjunction direct -1506 Apr 03 j 12:50 29°**米**41'43 0°37'56 -1498 Feb 21 j 02:59 0° 8 minimum elong -1506 Apr 03 j 16:24 29° ★42'14 20.67326 AU max. Earth dist. -1506 Apr 08 j 19:49 $0^{\circ}\Upsilon$ -1498 May 09 j 03:02 3°**8**44'12 0°-17'-33 conjunction -1506 Jul 23 j 17:14 3°**Y**49′22 -1498 May 09 j 03:02 3°**8**44'12 0°17'33 retrograde minimum elong -1506 Oct 08 j 03:11 1°**Y**48'28 0°-40'-57 -1498 May 08 j 13:43 3°**8**42'15 20.13481 AU opposition max. Earth dist. min. Earth dist. -1506 Oct 08 j 00:50 1°**Υ**48'43 18.64227 AU retrograde -1498 Aug 27 j 16:59 7°**8**59'01 -1506 Dec 01 j 14:22 30°R € opposition -1498 Nov 10 j 14:56 5°**8**57'14 0°-17'-39 direct -1506 Dec 21 j 16:40 29° **€**49'30 min. Earth dist. -1498 Nov 11 j 03:07 5°**8**55'56 18.09822 AU -1505 Jan 10 j 16:19 $0^{\circ}\Upsilon$ direct -1497 Jan 24 j 07:32 3°**8**55'21 max. Earth dist. -1497 May 13 j 08:37 8°806'21 20.06177 AU -1505 Apr 08 j 02:29 3°**Y**'50'30 0°-36'-2 conjunction -1505 Apr 08 j 02:29 3°Y50'30 0°36'03 -1497 May 14 j 00:08 8°808'39 0°-14'-17 minimum elong conjunction -1505 Apr 08 j 05:04 3°**Υ**′50'52 20.61090 AU -1497 May 14 j 00:08 8°**8**08'39 0°14'17 max. Earth dist. minimum elong -1505 Jul 28 i 06:39 7°Υ58'56 retrograde behind sun begin -1497 May 13 j 21:12 8°808'13 opposition -1505 Oct 12 i 11:20 5°Υ57'53 0°-38'-45 behind sun end -1497 May 14 i 03:05 8°**8**09'04 min. Earth dist. -1505 Oct 12 i 09:43 5°**Υ**58'03 18.57895 AU retrograde -1497 Sep 01 i 12:43 12°**8**24'20 direct -1505 Dec 26 j 02:08 3°Y58'34 opposition -1497 Nov 15 i 04:24 10°\(\begin{align*} \delta 22'25 & 0\) \delta -13'-58 min. Earth dist. -1497 Nov 15 j 17:32 10°\(21'01\) 18.02487 AU -1504 Apr 11 j 16:51 8°Υ'00'53 0°-33'-56 direct -1496 Jan 28 j 23:49 8°**8**20'05 conjunction -1504 Apr 11 j 16:51 8°Υ00'53 0°33'56 minimum elong max. Earth dist. -1504 Apr 11 j 16:30 8°**Y**00'50 20.54679 AU -1496 May 17 j 22:03 12°\(\begin{aligned}
 35'02 0°-10'-55 \end{aligned} conjunction -1504 Jul 31 j 18:34 12°Υ10'10 retrograde minimum elong -1496 May 17 j 22:04 12°**8**35'02 0°10'55 -1504 Oct 15 j 20:17 10°**Υ**08'58 0°-36'-20 opposition behind sun begin -1496 May 17 j 17:00 12°**8**34'18 min. Earth dist. $-1504 \text{ Oct } 15 \text{ j } 21:16 \quad 10^{\circ} \Upsilon 08'52 \quad 18.51415 \text{ AU}$ behind sun end -1496 May 18 j 03:07 12°**8**35'46 direct -1504 Dec 29 j 09:50 8°**Y**09'18 max. Earth dist. -1496 May 17 j 04:26 12°**8**32'24 19.98827 AU -1496 Jun 29 j 15:22 15°**8** -1503 Apr 16 j 08:03 12°**Y**13'02 0°-31'-39 -1496 Sep 05 j 05:51 16°**8**51'35 conjunction retrograde -1503 Apr 16 j 08:03 12°**Υ**13'02 -1496 Nov 14 j 17:37 15°R8 minimum elong 0°31'40 -1503 Apr 16 j 06:36 12°**Υ**12'49 20.48139 AU -1496 Nov 18 j 18:53 14°**8**49'31 0°-10'-11 max. Earth dist. opposition retrograde -1503 Aug 05 j 09:32 16°**Y**23'12 min. Earth dist. -1496 Nov 19 j 10:35 14°**8**47'50 17.95157 AU opposition -1503 Oct 20 j 05:39 14° Υ 21'53 0° -33'-42 direct -1495 Feb 01 j 14:07 12°**8**46'44 min. Earth dist. -1503 Oct 20 j 07:18 14° Υ 21'43 18.44806 AU -1495 Apr 17 j 06:01 15°**8** direct -1502 Jan 02 j 20:31 12° \cdot \cdot 21'53 -1495 May 22 j 20:30 17°**8**03'18 0°-7'-29 conjunction

-1495 May 22 j 20:30 17°**8**03'18 0°07'29

minimum elong

-1502 Apr 21 j 00:12 16° \begin{pmatrix} \gamma 27'06 & 0\circ -29'-10 \end{pmatrix}

conjunction

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1495 in astronomical counting style is the year 1496 BCE in historical counting style. behind sun begin -1495 May 22 j 14:21 17°**8**02'24 retrograde -1489 Oct 08 i 05:50 18° **1**52'41 opposition -1495 May 23 j 02:40 17°**8**04'12 -1489 Dec 20 j 20:46 16°**Д**49'59 0°17'25 behind sun end -1495 May 22 j 00:48 17°**8**00'21 19.91538 AU min. Earth dist. -1489 Dec 21 j 19:36 16°**Д**47'29 17.50527 AU max. Earth dist. -1495 Sep 10 j 02:23 21°**8**20'43 -1488 Mar 05 j 08:44 14°**Д**44'31 retrograde direct -1495 Nov 23 j 09:54 19°**8**18'29 0°-6'-18 -1488 Jun 24 j 03:01 19°**Д**07'32 19.48054 AU opposition max. Earth dist. -1495 Nov 24 j 02:19 19°**8**16'42 17.87923 AU min. Earth dist. -1488 Jun 25 ј 06:12 19°**Д**11'44 0°17'23 -1494 Feb 06 j 08:08 17°**8**15'14 direct conjunction -1488 Jun 25 j 06:12 19°**Ⅱ**11'44 minimum elong 0°17'25 -1488 Oct 12 j 05:04 23°**II**34'06 conjunction -1494 May 27 j 19:57 21°**8**33'25 0°-3'-58 retrograde minimum elong opposition -1488 Dec 24 j 17:33 21°**Ⅲ**31'27 0°21'13 -1494 May 27 j 13:15 21°**8**32'26 behind sun begin min. Earth dist. -1488 Dec 25 j 17:06 21°**Ц**28'52 17.45737 AU -1494 May 28 j 02:40 21°834'24 -1487 Mar 10 j 07:50 19°**Ⅲ**25'46 behind sun end direct -1487 Jun 29 j 04:44 23°**Д**49'44 19.43480 AU max. Earth dist. -1494 May 26 j 22:55 21°830'15 19.84366 AU max. Earth dist. retrograde -1494 Sep 14 j 20:21 25°851'38 opposition -1494 Nov 28 j 01:41 23°**8**49'15 0°-2'-22 conjunction -1487 Jun 30 j 09:44 23°**Ⅲ**54'14 0°20'45 min. Earth dist. -1494 Nov 28 j 20:20 23°**8**47'14 17.80852 AU minimum elong -1487 Jun 30 j 09:44 23°**I** 54'14 0°20'47 direct -1493 Feb 11 j 00:30 21°**8**45'33 retrograde -1487 Oct 17 j 04:48 28°**I**17'10 opposition -1487 Dec 29 j 15:07 26° II 14'32 0°24'54 conjunction min. Earth dist. -1487 Dec 30 j 15:29 26° II 11'53 17.41384 AU minimum elong -1493 Jun 01 j 20:04 26°**8**05'21 direct -1486 Mar 15 j 07:50 24°**耳**08'37 behind sun begin -1493 Jun 01 j 13:18 26°804'21 max. Earth dist. -1486 Jul 04 j 09:29 28° ДЗЗ'50 19.39322 AU behind sun end -1493 Jun 02 i 02:49 26°806'21 max. Earth dist. -1493 May 31 i 20:53 26°801'50 19.77413 AU conjunction -1486 Jul 05 j 14:02 28° **I**I 38'17 0°23'59 asc. node -1493 Jul 07 i 17:04 28° 810'47 minimum elong -1486 Jul 05 i 14:02 28°**Ⅲ**38'17 0°24'00 -1493 Aug 20 j 14:04 Π °0 -1486 Jul 27 i 18:09 0ಂಣ -1493 Sep 19 j 17:33 0°**Ⅲ**24'21 -1486 Oct 22 j 05:29 3°901'38 retrograde retrograde opposition -1485 Jan 03 j 13:26 0°959'04 0°28'26 -1493 Dec 02 j 18:15 28°\(\mathbf{2}21'50\) 0°01'36 min. Earth dist. -1485 Jan 04 j 14:06 opposition 0°956'22 17 37428 AU -1493 Dec 03 j 13:26 28°819'44 17.74037 AU -1485 Jan 26 j 22:45 30°R **Ⅱ** min. Earth dist. -1485 Mar 20 j 08:42 28°**Д**52'57 -1492 Feb 15 j 20:25 26°817'41 direct direct 0°ಅ -1492 May 26 j 03:11 -1485 May 10 j 11:33 Π $^{\circ}0$ -1492 Jun 05 j 20:47 0°II39'04 0°03'19 -1485 Jul 10 j 18:30 conjunction conjunction 3°523'39 0°27'04 -1492 Jun 05 j 20:48 -1485 Jul 10 j 18:30 0°**Д**39'04 0°03'21 minimum elong minimum elong 3°523'39 0°27'05 -1492 Jun 05 j 14:03 0°**Ⅲ**38′04 -1485 Jul 09 j 12:27 3°518'58 19.35568 AU behind sun begin max. Earth dist. -1492 Jun 06 j 03:33 0°**Ⅱ**40'04 -1485 Oct 27 j 05:48 behind sun end retrograde 7°9547'23 -1492 Jun 04 j 21:07 0°**Д**35'28 19.70733 AU -1484 Jan 08 j 12:38 max. Earth dist. opposition 5°544'51 0°31'48 retrograde -1492 Sep 23 j 12:33 4°**Ⅲ**58'48 min. Earth dist. -1484 Jan 09 j 14:10 5°542'03 17.33897 AU -1492 Dec 06 j 11:43 2°**II**56'11 0°05'36 direct -1484 Mar 24 j 10:02 3°938'31 opposition min. Earth dist. -1492 Dec 07 j 08:30 2°**Д**53'55 17.67535 AU direct -1491 Feb 19 j 15:16 0°**I**I51'39 conjunction -1484 Jul 14 j 23:06 8°9510'08 0°29'59 -1484 Jul 14 j 23:06 8°9510'08 minimum elong 0°30'01 -1491 Jun 10 j 22:06 5°**I**14'33 0°06'53 max. Earth dist. -1484 Jul 13 j 17:38 8°505'31 19.32245 AU conjunction -1491 Jun 10 j 22:07 5°**I**14'33 0°06'54 -1484 Oct 31 j 07:04 12°534'09 minimum elong retrograde -1491 Jun 10 j 15:50 5°**I**I13'37 -1483 Jan 12 j 12:27 10°531'38 0°34'57 behind sun begin opposition -1491 Jun 11 i 04:24 5°**Ⅱ**15'29 behind sun end min. Earth dist. -1483 Jan 13 i 13:34 10°528'53 17.30789 AU -1491 Jun 09 i 20:25 5°**Ⅱ**10'38 19.64424 AU max. Earth dist. direct -1483 Mar 29 j 12:35 8°9525'08 retrograde -1491 Sep 28 i 10:12 9°**Ⅲ**35'01 max. Earth dist. -1483 Jul 18 j 21:40 12°552'46 19.29365 AU opposition -1491 Dec 11 i 05:50 7°**I**32'20 0°09'35 min. Earth dist. -1491 Dec 12 j 03:00 7°**Ⅲ**30'01 17.61435 AU -1483 Jul 20 i 03:50 12°\$57'30 conjunction 0°32'42 direct -1490 Feb 24 j 12:37 5°**Ⅲ**27'26 -1483 Jul 20 i 03:50 12°557'30 minimum elong 0°32'42 max. Earth dist. -1490 Jun 14 j 22:36 9°**Д**47'54 19.58523 AU retrograde -1483 Nov 05 j 07:25 17°521'43 -1482 Jan 17 j 12:45 15°5519'13 0°37'52 opposition 9°II51'50 0°10'26 conjunction -1490 Jun 16 j 00:16 min. Earth dist. -1482 Jan 18 j 14:42 15°516'22 17.28161 AU minimum elong -1490 Jun 16 j 00:16 9°**Ⅱ**51'50 0°10'27 direct -1482 Apr 03 j 14:54 13°512'33 behind sun begin -1490 Jun 15 j 19:01 9°**I**51′03 max. Earth dist. -1482 Jul 24 j 03:01 17°540'53 19.26986 AU 9°**Ⅱ**52'37 behind sun end -1490 Jun 16 j 05:31 -1490 Oct 03 j 07:16 14°**I**12'58 -1482 Jul 25 j 08:37 17°545'32 retrograde conjunction 0°35'11 -1490 Dec 16 j 00:56 12°**Ⅲ**10'16 0°13'32 -1482 Jul 25 j 08:37 17°545'32 opposition minimum elong 0°35'13 -1490 Dec 16 j 23:15 12°**Д**07'49 17.55752 AU -1482 Nov 10 j 08:58 22°509'52 min. Earth dist. retrograde -1489 Mar 01 j 09:59 10°**Ⅲ**05'04 -1481 Jan 22 j 13:37 20°507'22 direct opposition 0°40'30 -1489 Jun 19 j 23:13 14° $\mathrm{I\!I}$ 26'38 19.53065 AU max. Earth dist. min. Earth dist. -1481 Jan 23 j 14:32 20°504'38 17.26033 AU direct -1481 Apr 08 j 19:06 18°500'34 conjunction -1489 Jun 21 j 02:52 14°**Ⅲ**30'54 0°13'57 max. Earth dist. -1481 Jul 29 j 07:58 22°529'25 19.25127 AU minimum elong -1489 Jun 21 j 02:52 14°**II**30'54 0°13'59 behind sun begin -1489 Jun 20 j 23:37 14°**Д**30'24 -1481 Jul 30 j 13:10 22°534'01 conjunction -1489 Jun 21 j 06:06 14°**Д**31'23 -1481 Jul 30 j 13:10 22°534'01 behind sun end minimum elong

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Earth dist. -1480 Aug 02 j 12:58 27°518'13 19.23868 AU opposition -1472 Mar 06 j 11:42 3° m/ 18'02 0°50'03 3° TQ 16'28 17.35585 AU -1480 Sep 16 j 20:34 $0^{\circ}\Omega$ min. Earth dist. -1472 Mar 07 j 02:21 1°**Ω**47'02 retrograde -1480 Nov 19 j 10:15 direct -1472 May 22 j 11:17 1°Mp12'15 -1479 Jan 25 j 18:56 30° Rூ -1479 Jan 31 j 16:44 29°5544'33 0°44'56 -1472 Sep 11 j 11:13 5° Mp 43'00 0°44'38 opposition conjunction -1472 Sep 11 j 11:13 min. Earth dist. -1479 Feb 01 j 16:27 29°541'57 17.23519 AU minimum elong 5° m 43'00 0°44'39 direct -1479 Apr 18 j 03:44 27°537'35 max. Earth dist. -1472 Sep 10 j 19:34 5° Mp 40'32 19.37521 AU -1479 Jul 03 j 20:00 $0^{\circ}\Omega$ retrograde -1472 Dec 27 j 12:56 10° Mp 04'24 opposition -1471 Mar 11 j 14:30 8°m/02'59 0°49'24 conjunction -1479 Aug 08 j 21:23 2°Ω11'28 0°41'06 min. Earth dist. -1471 Mar 12 j 03:21 8° m 01'36 17.39612 AU minimum elong -1479 Aug 08 j 21:23 2°Ω11'28 0°41'09 direct -1471 May 27 j 15:08 5° m 57'29 max. Earth dist. -1479 Aug 07 j 18:26 2°**Ω**07'12 19.23235 AU retrograde -1479 Nov 24 j 09:55 6°**Ω**35'38 conjunction -1471 Sep 16 j 10:44 10° mp 27'14 0°43'55 opposition -1478 Feb 05 j 18:56 4°**Ω**33'12 0°46'41 minimum elong -1471 Sep 16 j 10:44 10° mp 27'14 0°43'55 min. Earth dist. -1478 Feb 06 i 18:42 4°Ω30'36 17.23224 AU max. Earth dist. -1471 Sep 15 j 21:54 10° m 25'12 19.41757 AU direct -1478 Apr 23 i 08:03 2°Ω26'14 retrograde -1470 Jan 01 i 12:02 14° mp 47'57 max. Earth dist. -1478 Aug 12 j 22:41 6°Ω55'56 19.23288 AU opposition -1470 Mar 16 j 17:16 12° mp 46'40 0° 48'25 min. Earth dist. -1470 Mar 17 i 04:25 12° mp 45'28 17.44029 AU -1478 Aug 14 j 00:54 7°Ω00'05 0°42'31 -1470 Jun 01 j 19:34 10° mp 41'30 conjunction direct -1478 Aug 14 j 00:54 7°Ω00'05 0°42'32 minimum elong -1478 Nov 29 j 10:49 11°Ω24'04 -1470 Sep 21 j 09:15 15° mp 10'04 0°42'54 retrograde conjunction -1477 Feb 10 j 21:12 9°**Ω**21'41 0°48'06 -1470 Sep 21 j 09:16 15° Mp 10'04 0°42'54 opposition minimum elong -1477 Feb 11 j 18:45 9°**Ω**19'20 17.23623 AU -1470 Sep 20 j 21:28 15° m 08'13 19.46362 AU min. Earth dist. max. Earth dist. -1477 Apr 28 j 14:06 -1469 Jan 06 j 09:49 19° m 30'04 7°Ω14'46 retrograde direct -1477 Aug 18 j 04:19 11°**Ω**44'42 19.24041 AU opposition -1469 Mar 21 j 19:44 17° m 28'54 0°47'07 max. Earth dist. -1469 Mar 22 j 05:19 17° m 27'53 17.48815 AU min. Earth dist. -1477 Aug 19 j 04:07 11° Ω 48'29 0°43'39 -1469 Jun 06 j 22:55 15° m 24'02 conjunction direct -1477 Aug 19 j 04:07 11° Ω 48'29 0°43'40 minimum elong -1469 Sep 26 j 07:03 19° m 51'21 0°41'35 -1477 Oct 14 j 01:30 15°**Ω** conjunction -1477 Dec 04 j 10:28 16° Ω12'11 -1469 Sep 26 j 07:03 19° m 51'21 0°41'36 retrograde minimum elong -1476 Jan 27 j 04:43 15°**RΩ** max. Earth dist. -1469 Sep 25 j 21:57 19° m 49'55 19.51324 AU opposition -1476 Feb 15 j 23:59 14°**Ω**09'56 0°49'11 retrograde -1468 Jan 11 j 07:56 24° Mp 10'33 min. Earth dist. -1476 Feb 16 j 21:02 14° Ω 07'39 17.24732 AU opposition -1468 Mar 25 j 21:50 22° m 09'28 0°45'30 direct -1476 May 02 j 18:15 12°**Ω**03'09 min. Earth dist. -1468 Mar 26 j 05:09 22° m 08'42 17.53927 AU -1476 Jul 28 j 09:03 15°**Ω** -1468 Jun 11 j 03:08 20° M 04'56 direct max. Earth dist. -1476 Aug 22 j 07:32 16° **Ω**32'54 19.25513 AU -1468 Sep 30 j 03:42 24° m/30'51 0°40'01 conjunction -1476 Aug 23 j 06:32 16° **Ω**36'33 0°44'28 -1468 Sep 30 j 03:42 24° m 30'51 conjunction minimum elong -1476 Aug 23 j 06:32 $16^{\circ}\Omega$ 36'33 $0^{\circ}44'28$ -1468 Sep 29 j 20:09 24° m 29'40 19.56602 AU minimum elong max. Earth dist. -1476 Dec 08 i 11:49 $20^{\circ}\Omega$ 59'56 -1467 Jan 15 i 03:43 28° m 49'13 retrograde retrograde -1475 Feb 20 j 02:43 $18^{\circ}\Omega$ 57'49 0°49'55 opposition opposition -1467 Mar 30 j 23:26 26° m 48'13 0°43'35 min. Earth dist. -1475 Feb 20 j 21:25 $18^{\circ}\Omega$ 55'48 17.26542 AU min. Earth dist. -1467 Mar 31 j 05:24 26° mp 47'35 17.59364 AU direct -1475 May 07 j 23:42 $16^{\circ}\Omega$ 51'13 direct -1467 Jun 16 j 04:53 24° mp 43'59 -1475 Aug 28 j 08:44 21° Ω 24'11 0°44'58 -1467 Oct 04 j 23:29 29° m 08'26 0°38'11 conjunction conjunction -1475 Aug 28 j 08:44 21° Ω 24'11 0°44'58 -1467 Oct 04 j 23:29 29° m 08'26 0°38'11 minimum elong minimum elong -1475 Aug 27 j 12:36 21° **Ω**21'00 19.27655 AU -1467 Oct 04 j 18:27 29° m 07'38 19.62199 AU max. Earth dist. max. Earth dist. retrograde -1475 Dec 13 j 11:40 $25^{\circ}\Omega47'11$ -1467 Oct 18 j 18:32 0∘**⊽** -1474 Feb 25 j 05:34 23° Ω 45'15 0° 50'19 opposition retrograde -1466 Jan 20 j 00:31 3°**£**25'55 min. Earth dist. -1474 Feb 25 j 23:33 23°**Ω**43'18 17.28990 AU opposition -1466 Apr 05 j 00:20 1°**2**24'59 0°41'24 -1474 May 13 j 03:10 21° Ω38'54 min. Earth dist. -1466 Apr 05 j 03:33 1°**£**24'39 17.65103 AU direct -1466 May 12 j 04:58 30°R, Mp -1474 Sep 02 j 10:13 $26^{\circ}\Omega$ 11'17 $0^{\circ}45'10$ -1466 Jun 21 j 07:55 29° My 21'04 conjunction direct -1466 Jul 30 j 04:43 minimum elong -1474 Sep 02 j 10:13 $26^{\circ}\Omega$ 11'17 $0^{\circ}45'12$ 0∘**⊽** max. Earth dist. -1474 Sep 01 j 14:46 $26^{\circ}\Omega$ 08'11 19.30413 AU -1474 Nov 13 j 17:29 0° m conjunction -1466 Oct 09 j 18:13 3°**£**43'58 0°36'08 retrograde -1474 Dec 18 j 12:58 0° m 33'49 minimum elong -1466 Oct 09 j 18:13 3°**£**43'58 0°36'07 -1473 Jan 23 j 07:19 30°R. € max. Earth dist. -1466 Oct 09 j 15:21 3°**♀**43'31 19.68104 AU -1473 Mar 02 j 08:34 28° **Q**32'03 0°50'21 -1465 Jan 24 j 18:46 8°**£**00'34 opposition retrograde

-1465 Apr 10 j 00:55

opposition

5°**2**59'42 0°38'58

-1473 Mar 03 j 00:27 $28^{\circ}\Omega$ 30'21 17.32033 AU

min. Earth dist.

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Earth dist. -1464 Apr 13 j 23:12 10°**♀**32'29 17.77580 AU behind sun end -1457 Nov 18 j 06:41 13°M 36'33 direct -1464 Jun 30 j 08:33 8°**2**9′08 max. Earth dist. -1457 Nov 18 j 16:57 13°M 38'06 20.31399 AU -1457 Dec 11 j 17:55 15°M -1464 Oct 18 j 04:36 12°**2**48'49 0°31'23 -1456 Mar 05 j 02:17 17° ML44'34 conjunction retrograde -1464 Oct 18 j 04:36 12°**•**48'49 minimum elong 0°31'23 opposition -1456 May 20 j 22:06 15°M45'02 0°09'37 max. Earth dist. -1464 Oct 18 j 06:47 12° **2**49'10 19.80913 AU min. Earth dist. -1456 May 20 j 05:14 15°ML46'45 18.34898 AU retrograde -1463 Feb 02 j 07:29 17°**♀**03'36 -1456 Jun 08 j 21:35 15°RM opposition -1463 Apr 18 j 23:45 15°**♀**02'57 direct -1456 Aug 05 j 20:18 13°M45'25 min. Earth dist. -1463 Apr 18 j 20:57 15°**♀**03'14 17.84304 AU -1456 Sep 29 j 16:46 15°M direct -1463 Jul 05 j 06:10 13°**೨**00'09 conjunction -1456 Nov 21 j 11:53 17° ML52'20 conjunction -1463 Oct 22 j 20:25 17°**2**18'13 0°28'45 minimum elong -1456 Nov 21 j 11:53 17°M 52'20 0°07'02 minimum elong -1463 Oct 22 j 20:25 17° **2**18'13 0°28'44 behind sun begin -1456 Nov 21 j 05:49 17° ML51'26 max. Earth dist. -1463 Oct 23 i 00:38 17° **2**18'52 19.87788 AU behind sun end -1456 Nov 21 j 17:57 17° ML53'13 retrograde -1462 Feb 07 i 02:19 21° **2**32'06 max. Earth dist. -1456 Nov 22 i 05:34 17°M 54'59 20.38351 AU opposition -1462 Apr 23 j 22:07 19°**2**31'36 0°30'26 retrograde -1455 Mar 09 j 14:11 22° ML00'17 min. Earth dist. -1462 Apr 23 i 15:58 19° **2**32'14 17.91299 AU opposition -1455 May 25 j 15:21 20° M 00'51 0°05'55 direct -1462 Jul 10 j 04:34 17°**£**29'15 min. Earth dist. -1455 May 24 j 22:02 20° ML02'37 18.41733 AU direct -1455 Aug 10 j 12:13 18°M01'37 -1462 Oct 27 j 11:16 21° **2**45'43 0°25'58 conjunction -1462 Oct 27 j 11:16 21° **2**45'43 0°25'58 -1455 Nov 25 j 21:22 22°M06'59 conjunction 0°03'45 minimum elong -1462 Oct 27 j 18:16 21° **2**46'47 19.94894 AU minimum elong -1455 Nov 25 j 21:23 22°ML07'00 0°03'44 max. Earth dist. -1461 Feb 11 j 18:25 25°**♀**58'43 -1455 Nov 25 j 14:55 22°M 06'03 retrograde behind sun begin -1461 Apr 28 j 20:02 23°**♀**58'23 0°27'14 -1455 Nov 26 j 03:51 22°ML07'56 opposition behind sun end -1455 Nov 26 j 15:23 22°ML09'41 20.45066 AU min. Earth dist. -1461 Apr 28 j 12:44 23°**♀**59'08 17.98504 AU max. Earth dist. -1461 Jul 15 j 00:28 21° **2**56'31 -1454 Mar 14 j 04:25 26° ML 14'09 direct retrograde -1454 May 30 j 07:53 24° ML14'46 0°02'13 opposition -1461 Nov 01 j 01:16 26°**£**11'20 0°23'02 -1454 May 29 j 12:37 24° ML 16'43 18.48323 AU conjunction min. Earth dist. -1461 Nov 01 j 01:16 26°**£**11'20 0°23'02 -1454 Aug 15 j 03:56 22°M 15'50 minimum elong direct max. Earth dist. -1461 Nov 01 j 09:54 26°**2**12'39 20.02184 AU -1460 Jan 17 j 15:02 0° M conjunction -1454 Nov 30 j 06:12 26°M 19'44 0°00'21 retrograde -1460 Feb 16 j 12:26 0°M23'28 minimum elong -1454 Nov 30 j 06:12 26°M 19'44 0°00'20 -1460 Mar 18 j 04:38 30°R **≏** behind sun begin -1454 Nov 29 j 23:41 26°M18'48 -1460 May 02 j 16:59 28°**£**23'20 0°23'54 behind sun end -1454 Nov 30 j 12:42 26°M20'41 opposition min. Earth dist. -1460 May 02 j 06:35 28°**2**24'24 18.05846 AU max. Earth dist. -1454 Dec 01 j 02:32 26°M22'46 20.51521 AU direct -1460 Jul 18 j 20:32 26°**2**21'56 desc. node -1453 Jan 07 j 11:39 28°M29'46 -1460 Oct 25 j 23:49 -1453 Feb 14 j 08:48 0°×7 retrograde -1453 Mar 18 i 14:45 0°**х** 26′08 -1460 Nov 04 i 14:30 -1453 Apr 20 j 17:05 30°RM conjunction 0°MJ35'09 0°20'00 minimum elong -1460 Nov 04 j 14:30 0°M35'09 0°19'59 opposition -1453 Jun 03 j 23:40 28° M26'46 0°-1'-27 max. Earth dist. -1460 Nov 05 i 01:47 0°MJ36'52 20.09553 AU min. Earth dist. -1453 Jun 03 i 03:47 28°M28'46 18.54656 AU retrograde -1459 Feb 20 i 03:24 4°ML46'26 direct -1453 Aug 19 j 18:17 26°M28'07 -1459 May 07 i 13:24 2°ML46'29 0°20'27 -1453 Nov 26 j 00:11 opposition 0°×7 min. Earth dist. -1459 May 07 j 02:12 2°ML47'37 18.13230 AU 0°M45'34 direct -1459 Jul 23 j 15:06 conjunction -1453 Dec 04 j 14:14 0°**₹**30'34 0°-3'-1 minimum elong -1453 Dec 04 j 14:14 0°**х** 30′34 0°03'03 conjunction -1459 Nov 09 j 02:51 4°ML57'10 0°16'51 behind sun begin -1453 Dec 04 j 07:44 0°**х¹**29'38 minimum elong -1459 Nov 09 j 02:51 4°ML57'10 0°16'50 behind sun end -1453 Dec 04 j 20:44 0°**х** 31'30 max. Earth dist. -1459 Nov 09 j 15:12 4° ነቤ59'02 20.16932 AU max. Earth dist. -1453 Dec 05 j 10:55 0°**х** 33'38 20.57741 AU -1458 Feb 24 j 20:39 retrograde -1452 Mar 22 j 03:06 4°**∡**³36′12 retrograde 9°ML07'36 -1458 May 12 j 08:57 7°ML07'49 0°16'54 -1452 Jun 07 j 14:22 2°**∡**³36′50 0°-5'-5 opposition opposition min. Earth dist. -1452 Jun 06 j 16:47 2°**尽**39'00 18.60774 AU min. Earth dist. -1458 May 11 j 19:01 7°ML09'14 18.20581 AU -1458 Jul 28 j 09:33 direct -1452 Aug 23 j 07:38 0°**∡**³38′27 direct 5°**™**07'22 conjunction -1458 Nov 13 j 14:37 9°M17'23 0°13'38 conjunction -1452 Dec 07 j 21:45 4°**∡**³39'33 0°-6'-16 minimum elong -1458 Nov 13 j 14:37 9°**I**L17′23 0°13'37 minimum elong -1452 Dec 07 j 21:46 4°**х** 39'33 0°06'18 behind sun begin -1458 Nov 13 j 10:54 9°M16'50 behind sun begin -1452 Dec 07 j 15:35 4°**х** 38′40 behind sun end -1458 Nov 13 j 18:20 behind sun end -1452 Dec 08 j 03:57 4°**∡**°40′26 9°M17'56 max. Earth dist. -1458 Nov 14 j 05:28 9° M 19'37 20.24232 AU max. Earth dist. -1452 Dec 08 j 20:48 4°**≯**42'57 20.63740 AU

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Earth dist. -1451 Dec 12 j 04:29 -1443 Apr 28 j 14:01 minimum elong 8°**х** 46′47 0°09'31 retrograde 11°**る**04'19 8°**х** 46′00 -1443 Jul 15 j 20:28 0°-33'-41 behind sun begin -1451 Dec 11 j 23:01 opposition 9°**る**05'27 behind sun end -1451 Dec 12 j 09:58 8°**х** 47'34 min. Earth dist. -1443 Jul 14 j 17:27 9°る08'09 19.04072 AU max. Earth dist. -1451 Dec 13 j 03:47 8°**∡**50'13 20.69542 AU direct -1443 Sep 29 j 17:08 7°**る**09'17 retrograde -1450 Mar 30 j 23:14 12°**₹**′51′04 -1442 Jan 12 j 23:35 11°중01'58 0°-31'-37 opposition -1450 Jun 16 j 17:39 10°**∡**′51'44 0°-12'-11 conjunction -1442 Jan 12 j 23:35 11° ₹ 01'58 0°31'39 min. Earth dist. -1450 Jun 15 j 17:43 10°**✗**′54′08 18.72388 AU minimum elong direct -1450 Sep 01 j 07:03 8°**х** 53′52 max. Earth dist. -1442 Jan 14 j 03:10 11°중05'56 21.05461 AU retrograde -1442 May 02 j 22:37 15°る03'07 conjunction -1450 Dec 16 j 10:58 12°**√**52'29 0°-12'-35 min. Earth dist. -1442 Jul 19 j 02:40 13°중06'53 19.06798 AU minimum elong -1450 Dec 16 j 10:58 12°₹52'28 0°12'37 opposition -1442 Jul 20 j 05:11 13°**정**04'14 0°-36'-10 behind sun begin -1450 Dec 16 j 06:41 12° ₹ 51'52 direct -1442 Oct 03 j 22:50 11°♂08'11 behind sun end -1450 Dec 16 j 15:14 12° ₹ 53'05 max. Earth dist. -1450 Dec 17 j 12:31 12° ₹756'13 20.75145 AU conjunction -1441 Jan 17 j 04:30 15°る00'22 0°-33'-47 retrograde -1449 Apr 04 j 08:31 16° ₹ 56'09 minimum elong -1441 Jan 17 j 04:29 15°る00'22 0°33'50 min. Earth dist. -1449 Jun 20 i 05:28 14° ₹ 59'21 18.77887 AU max. Earth dist. -1441 Jan 18 j 08:52 15°る04'26 21.07897 AU opposition -1449 Jun 21 j 06:12 14° ₹ 56'52 0°-15'-37 retrograde -1441 May 07 i 06:05 19°る01'19 direct -1449 Sep 05 j 17:43 12° ₹ 59'17 min. Earth dist. -1441 Jul 23 j 10:57 17°る05'02 19.08950 AU opposition -1441 Jul 24 j 13:16 17°る02'25 0°-38'-28 -1449 Dec 20 j 16:49 16° \$\mathref{7}\$ 56'46 0°-15'-38 -1441 Oct 08 j 05:29 15°る06'25 conjunction direct -1449 Dec 20 j 16:49 16° ₹ 56'46 0°15'41 minimum elong -1449 Dec 20 j 15:03 16° ₹ 56'31 -1440 Jan 21 j 09:09 18°る58'09 0°-35'-47 behind sun begin conjunction -1449 Dec 20 j 18:36 16° ₹ 57'01 -1440 Jan 21 j 09:09 18°る58'09 behind sun end minimum elong 0°35'49 -1440 Jan 22 j 12:01 19°る01'59 21.09779 AU -1449 Dec 21 j 18:20 17° ₹00'30 20.80532 AU max. Earth dist. max. Earth dist. -1448 Apr 07 j 18:20 20° ₹ 59'55 -1440 May 10 j 13:59 22°る58'58 retrograde retrograde -1448 Jun 24 j 18:02 19° ₹ 00'42 0°-18'-56 -1440 Jul 27 j 20:58 20°중59'59 0°-40'-35 opposition opposition -1448 Jun 23 j 16:14 19°■03'17 18.83155 AU -1440 Jul 26 j 19:28 21°중02'32 19.10567 AU min. Earth dist. min. Earth dist. -1440 Oct 11 j 09:46 19°**♂**04'00 -1448 Sep 09 j 02:44 17° **₹** 03'23 direct direct -1448 Dec 23 j 22:31 20°**x** 59'51 0°-18'-35 -1439 Jan 24 j 13:51 22°る55'23 0°-37'-37 conjunction conjunction -1448 Dec 23 j 22:31 20°**尽** 59'51 0°18'37 -1439 Jan 24 j 13:51 22°**궁**55'23 0°37'40 minimum elong minimum elong max. Earth dist. -1448 Dec 25 j 01:57 21° ₹ 03'51 20.85649 AU max. Earth dist. -1439 Jan 25 j 17:29 22°중59'20 21.11132 AU retrograde -1447 Apr 12 j 03:12 25° ₹ 02'31 retrograde -1439 May 14 j 21:06 26° ₹ 56'06 min. Earth dist. -1447 Jun 28 j 02:47 23°**尽** 06'01 18.88121 AU min. Earth dist. -1439 Jul 31 j 02:46 24° 궁59'35 19.11673 AU opposition -1447 Jun 29 j 05:08 23°**尽** 03'23 0°-22'-9 opposition -1439 Aug 01 j 04:06 24°る57'03 0°-42'-29 -1447 Sep 13 j 11:56 21° ₹ 06'21 direct -1439 Oct 15 j 16:11 23°**♂**01'03 direct -1447 Dec 28 j 03:47 25° ₹01'53 0°-21'-27 -1438 Jan 28 j 18:28 26° 중52'10 0°-39'-15 conjunction conjunction -1447 Dec 28 j 03:47 25° ₹01'53 0°21'29 -1438 Jan 28 j 18:28 26° ₹52'10 0°39'18 minimum elong minimum elong -1447 Dec 29 i 06:49 25° ₹05'48 20.90460 AU -1438 Jan 29 j 20:38 26°る55'53 21.12017 AU max. Earth dist. max. Earth dist. -1446 Apr 16 j 12:38 29° ₹04'08 retrograde -1438 Apr 01 i 16:34 opposition -1446 Jul 03 j 15:50 27° ₹ 05'05 0°-25'-15 retrograde -1438 May 19 j 04:51 0°≈52'52 min. Earth dist. -1446 Jul 02 j 12:55 27° ₹07'46 18.92766 AU -1438 Jul 07 i 03:51 30°Rる direct -1446 Sep 17 j 19:39 25° ₹08'19 min. Earth dist. -1438 Aug 04 i 10:30 28°₹56'09 19.12348 AU opposition -1438 Aug 05 j 11:00 28°る53'42 0°-44'-12 -1445 Jan 01 i 08:55 29° ₹03'00 0°-24'-11 direct -1438 Oct 19 j 19:34 26°る57'40 conjunction -1445 Jan 01 j 08:54 29° ₹03'00 0°24'14 -1437 Jan 18 j 15:52 minimum elong 0°≈ -1445 Jan 02 j 13:34 29° ₹07'09 20.94906 AU max. Earth dist. 0°≈48'37 0°-40'-42 -1445 Jan 17 j 21:36 0°ਰ conjunction -1437 Feb 01 j 23:17 -1445 Apr 20 j 21:04 retrograde 3°**る**04'54 minimum elong -1437 Feb 01 j 23:17 0°≈48'37 0°40'44 -1445 Jul 06 j 22:46 min. Earth dist. 1°る08'39 18.97006 AU max. Earth dist. -1437 Feb 03 j 02:10 0°≈52'27 21.12475 AU -1445 Jul 08 j 01:57 1°る05'56 0°-28'-13 -1437 May 23 j 12:03 opposition retrograde 4°≈49'20 -1445 Aug 06 j 08:04 30°R ⊀ opposition -1437 Aug 09 j 17:27 2°≈50'05 0°-45'-41 -1445 Sep 22 j 03:32 29°**₹**09'24 direct min. Earth dist. -1437 Aug 08 j 17:05 2°≈52'32 19.12598 AU -1445 Nov 06 j 02:11 0°る direct -1437 Oct 24 j 01:10 0°≈54'02 conjunction -1444 Jan 05 j 13:53 3°**ට**03'20 0°-26'-48 conjunction -1436 Feb 06 j 04:14 4°≈44'55 0°-41'-57 minimum elong -1444 Jan 05 j 13:53 3°**る**03'20 0°26'50 minimum elong -1436 Feb 06 j 04:14 4°**≈**44'55 0°42'00 max. Earth dist. -1444 Jan 06 j 17:40 3°る07'21 20.98928 AU max. Earth dist. -1436 Feb 07 j 05:25 4°≈48'30 21.12530 AU -1444 Apr 24 j 06:12 7°**る**04'56 -1436 May 26 j 20:07 8°≈45'44 retrograde retrograde min. Earth dist. -1444 Jul 10 j 08:20 5°る08'43 19.00802 AU -1436 Aug 12 j 23:36 6°≈46'24 0°-46'-58 opposition

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•	omena of Uranus fr		•				age 32
	nical year style is used: Tl	-					
min. Earth dist.	-1436 Aug 12 j 00:20		19.12464 AU	max. Earth dist.	-1428 Mar 10 j 01:35		20.97669 AU
direct	-1436 Oct 27 j 04:33	4° ≈ 50'18		retrograde	-1428 Jun 28 j 16:58		00.40100
	1425 F. 1. 00 : 00 21	00 - 4111 4	00 421 1	opposition	-1428 Sep 13 j 23:54	8°) ₹33'12	
conjunction	-1435 Feb 09 j 09:31	8°≈41'14		min. Earth dist.	-1428 Sep 13 j 10:58		18.95697 AU
minimum elong	-1435 Feb 09 j 09:30	8°≈41'14	0°43'02	direct	-1428 Nov 27 j 15:34	6° ∺ 36'11	
max. Earth dist.	-1435 Feb 10 j 11:11		21.12198 AU		140534 10:10.40	1001/20152	00 424 50
retrograde	-1435 May 31 j 03:31	12°≈42'12	10 11022 411	conjunction	-1427 Mar 13 j 19:43		
min. Earth dist.	-1435 Aug 16 j 06:32		19.11933 AU	minimum elong	-1427 Mar 13 j 19:43		
opposition	-1435 Aug 17 j 05:38	10°≈42'49	0°-48'-2	max. Earth dist.	-1427 Mar 14 j 10:09		20.93555 AU
direct	-1435 Oct 31 j 09:03	8° ≈ 46'42		retrograde	-1427 Jul 03 j 03:32		00 401 10
	1424 F 1 12:14 40	100 - 27145	00 421 52	opposition	-1427 Sep 18 j 06:18		
conjunction	3			min. Earth dist.	-1427 Sep 17 j 18:22		18.91332 AU
minimum elong	-1434 Feb 13 j 14:48	12°≈37'45	0°43'55	direct	-1427 Dec 01 j 22:22	10°大3/4/	
max. Earth dist.	-1434 Feb 14 j 14:39		21.11482 AU		142634 10:05.22	1.40 1/22117	00 421 7
. 1	-1434 Mar 30 j 04:38	15° ≈		conjunction	-1426 Mar 18 j 05:23		0°-43'-7
retrograde	-1434 Jun 04 j 12:08	16°≈38'58		minimum elong	-1426 Mar 18 j 05:23		
	-1434 Aug 12 j 23:26	15°R≈		max. Earth dist.	-1426 Mar 18 j 16:50		20.88977 AU
opposition	-1434 Aug 21 j 11:42	14° ≈ 39'31		retrograde	-1426 Jul 07 j 12:43		
min. Earth dist.	-1434 Aug 20 j 13:54		19.11021 AU	opposition	-1426 Sep 22 j 13:00		0°-47'-5
direct	-1434 Nov 04 j 12:42	12° ≈ 43′20		min. Earth dist.	-1426 Sep 22 j 03:32		18.86544 AU
	-1433 Jan 20 j 08:20	15° ≈		direct	-1426 Dec 06 j 03:17	14° ∺ 40'17	
						.,	
conjunction	-1433 Feb 17 j 20:49	16° ≈ 34'39	0°-44'-32	conjunction	-1425 Mar 22 j 16:02		0°-42'-2
minimum elong	-1433 Feb 17 j 20:49	16° ≈ 34'39	0°44'34	minimum elong	-1425 Mar 22 j 16:02		0°42'03
max. Earth dist.	-1433 Feb 18 j 20:55		21.10365 AU	max. Earth dist.	-1425 Mar 23 j 02:42		20.84000 AU
retrograde	-1433 Jun 08 j 20:06	20° ≈ 36′08		retrograde	-1425 Jul 11 j 23:35		
opposition	-1433 Aug 25 j 17:27	18° ≈ 36′39		opposition	-1425 Sep 26 j 19:38		0°-45'-47
min. Earth dist.	-1433 Aug 24 j 20:10		19.09688 AU	min. Earth dist.	-1425 Sep 26 j 11:05		18.81384 AU
direct	-1433 Nov 08 j 16:55	16° ≈ 40′25		direct	-1425 Dec 10 j 10:43	18° ∺ 43'50	
conjunction	-1432 Feb 22 j 03:08	20° ≈ 32'04	0°-44'-59	conjunction	-1424 Mar 26 j 03:09		0°-40'-43
minimum elong	-1432 Feb 22 j 03:08	20° ≈ 32'04		minimum elong	-1424 Mar 26 j 03:09		0°40'44
max. Earth dist.	-1432 Feb 23 j 00:58		21.08823 AU	max. Earth dist.	-1424 Mar 26 j 10:50		20.78686 AU
retrograde	-1432 Jun 12 j 04:47	24° ≈ 33'56		retrograde	-1424 Jul 15 j 09:49		
opposition	-1432 Aug 28 j 23:25	22° ≈ 34'24		opposition	-1424 Sep 30 j 02:49		0°-44'-14
min. Earth dist.	-1432 Aug 28 j 03:55		19.07920 AU	min. Earth dist.	-1424 Sep 29 j 20:40		18.75929 AU
direct	-1432 Nov 11 j 20:41	20° ≈ 38′05		direct	-1424 Dec 13 j 16:28	22°) 48′33	
conjunction	-1431 Feb 25 j 10:02			conjunction	-1423 Mar 30 j 14:57		0°-39'-13
minimum elong	-1431 Feb 25 j 10:02	24° ≈ 30'11	0°45'16	minimum elong	-1423 Mar 30 j 14:57		0°39'13
max. Earth dist.	-1431 Feb 26 j 07:43		21.06815 AU	max. Earth dist.	-1423 Mar 30 j 21:58		20.73101 AU
retrograde	-1431 Jun 16 j 13:47	28° ≈ 32'26			-1423 Jun 02 j 12:04	0 ° $\mathbf{\gamma}$	
min. Earth dist.	-1431 Sep 01 j 10:38		19.05658 AU	retrograde	-1423 Jul 19 j 21:21	0° Υ 53'58	
opposition	-1431 Sep 02 j 05:19	26° ≈ 32'51	0°-50'-1		-1423 Sep 06 j 01:01		
direct	-1431 Nov 16 j 01:36	24° ≈ 36′26		opposition	-1423 Oct 04 j 10:12	28°) 53′13	0°-42'-27
				min. Earth dist.	-1423 Oct 04 j 04:44		18.70219 AU
conjunction	-1430 Mar 01 j 17:28	28° ≈ 29'04	0°-45'-15	direct	-1423 Dec 18 j 00:29	26° ¥ 54'37	
minimum elong	-1430 Mar 01 j 17:28	28° ≈ 29'04			-1422 Mar 19 j 07:49	0 ° Υ	
max. Earth dist.	-1430 Mar 02 j 12:28		21.04308 AU				
	-1430 Mar 29 j 00:22	0° ∺		conjunction	-1422 Apr 04 j 03:31	0° Y 54'19	0°-37'-29
retrograde	-1430 Jun 20 j 22:20	2°) (31'47		minimum elong	-1422 Apr 04 j 03:31	0° Y 54'19	0°37'31
opposition	-1430 Sep 06 j 11:26		0°-49'-55	max. Earth dist.	-1422 Apr 04 j 07:36		20.67289 AU
min. Earth dist.	-1430 Sep 05 j 18:58		19.02890 AU	retrograde	-1422 Jul 24 j 08:37	5° Y 01'59	
	-1430 Sep 19 j 19:11	30° R ≈		opposition	-1422 Oct 08 j 18:03	3° Y ′01′04	0°-40'-27
direct	-1430 Nov 20 j 05:27	28° ≈ 35'33		min. Earth dist.	-1422 Oct 08 j 15:03		18.64313 AU
	-1429 Jan 18 j 01:41	0° ∀		direct	-1422 Dec 22 j 07:29	1° Y '02'08	
conjunction	-1429 Mar 06 j 01:42	2° ∺ 28'48		conjunction	-1421 Apr 08 j 17:08	5° Y 03'07	0°-35'-34
minimum elong	-1429 Mar 06 j 01:42	2°) €28'48		minimum elong	-1421 Apr 08 j 17:08	5° ℃ 03'07	0°35'34
max. Earth dist.	-1429 Mar 06 j 20:02		21.01266 AU	max. Earth dist.	-1421 Apr 08 j 20:20	5° Y 03'35	20.61296 AU
retrograde	-1429 Jun 25 j 08:30	6° ∺ 31'59		retrograde	-1421 Jul 28 j 21:25	9° Ƴ 11'34	
opposition	-1429 Sep 10 j 17:36		0°-49'-35	opposition	-1421 Oct 13 j 02:17	7° Y 10′33	0°-38'-13
min. Earth dist.	-1429 Sep 10 j 02:13		18.99560 AU	min. Earth dist.	-1421 Oct 13 j 00:02	7° Y 10'47	18.58225 AU
direct	-1429 Nov 24 j 11:22	2° ∺ 35'28		direct	-1421 Dec 26 j 16:24	5° Ƴ 11'18	
conjunction	-1428 Mar 09 j 10:22	6° ∺ 29'23	0°-44'-38	conjunction	-1420 Apr 12 j 07:22	9° Ƴ 13'37	0°-33'-26
minimum elong	-1428 Mar 09 j 10:22	6° ∺ 29'23	0°44'38	minimum elong	-1420 Apr 12 j 07:22	9° Ƴ 13'37	0°33'28

Planetary Phenomena of Uranus from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:44, Attention, astronomical year style is used: The year -1420 in astronomical counting style is the year 1421 BCE in historical counting style. -1420 Apr 12 j 07:37 9° Υ 13'39 20.55130 AU max. Earth dist. conjunction -1412 May 18 j 12:07 13°847'27 0°-10'-20 -1420 Aug 01 j 09:46 13°**Υ**22'56 minimum elong -1412 May 18 j 12:07 13°**8**47'27 0°10'20 retrograde -1420 Oct 16 j 11:09 11°**Υ**21'48 0°-35'-46 behind sun begin -1412 May 18 j 06:49 13°**8**46'41 opposition -1412 May 18 j 17:24 13°**8**48'13 -1420 Oct 16 j 11:30 11°**Υ**21'46 18.51984 AU min. Earth dist. behind sun end -1412 May 17 j 18:38 13°**8**44'51 19.99852 AU -1420 Dec 30 j 00:37 9°**Y**22'15 direct max. Earth dist. -1412 Jun 07 j 23:20 15°8 -1412 Sep 05 j 19:46 18°**8**03'46 -1419 Apr 16 j 22:42 13°**Y**25'59 conjunction 0°-31'-8 retrograde -1412 Nov 19 j 09:19 16°**8**01'40 $-1419 \text{ Apr } 16 \text{ j } 22:42 \quad 13^{\circ} \Upsilon 25'59$ minimum elong 0°31'08 opposition 0°-9'-31 -1412 Nov 20 j 00:56 15°**8**59'59 17.96201 AU -1419 Apr 16 j 21:55 13°**Υ**25'52 max. Earth dist. 20.48819 AU min. Earth dist. -1419 Aug 06 j 00:19 17°**Y**36′09 -1412 Dec 14 j 08:37 15°R8 retrograde -1419 Oct 20 j 20:28 15°**Υ**34'58 opposition 0°-33'-6 direct -1411 Feb 02 j 05:21 13°**8**58'52 -1419 Oct 20 j 21:42 15° Υ 34'50 18.45586 AU -1411 Mar 23 j 04:53 15°**8** min. Earth dist. -1418 Jan 03 j 10:59 13°**Y**35'05 direct conjunction -1411 May 23 j 10:30 18°**8**15'08 conjunction -1418 Apr 21 j 14:51 17°**Υ**'40'18 0°-28'-37 minimum elong -1411 May 23 j 10:30 18°**8**15'08 0°06'53 minimum elong -1418 Apr 21 j 14:51 17°**Υ**'40'18 0°28'38 behind sun begin -1411 May 23 j 04:13 18°**8**14'13 max. Earth dist. -1418 Apr 21 j 11:01 17°**Υ**39'44 20.42339 AU behind sun end -1411 May 23 j 16:47 18°**8**16'03 retrograde -1418 Aug 10 j 14:03 21°**Υ**51'23 max. Earth dist. -1411 May 22 j 15:09 18°**8**12'14 19.92607 AU opposition -1418 Oct 25 j 06:36 19°**Υ**'50'07 0°-30'-15 retrograde -1411 Sep 10 j 15:14 22°\(\mathbf{8}\)32'17 min. Earth dist. -1418 Oct 25 j 10:45 19°Υ49'40 18.39016 AU opposition -1411 Nov 24 j 00:04 20°\begin{align*} 20^{\circ} \begin{align*} 30'01 & 0^{\circ} -5' -39 \end{align*} direct -1417 Jan 07 j 20:25 17°**Y**49'54 min. Earth dist. -1411 Nov 24 j 16:16 20°828'16 17.89027 AU direct -1410 Feb 06 j 22:57 18°**8**26'45 conjunction -1417 Apr 26 i 08:15 21° **Y** 56'38 0° -25'-57 minimum elong $-1417 \text{ Apr } 26 \text{ j } 08:15 \quad 21^{\circ} \Upsilon 56'38 \quad 0^{\circ} 25'57$ conjunction -1410 May 28 i 09:44 22°**8**44'38 0°-3'-24 max. Earth dist. -1417 Apr 26 j 02:50 21° Υ 55'51 20.35673 AU minimum elong -1410 May 28 j 09:44 22°**8**44'38 0°03'24 retrograde -1417 Aug 15 i 06:30 26° Υ 08'37 behind sun begin -1410 May 28 i 02:59 22°843'38 opposition -1417 Oct 29 j 17:10 24° Υ 07'15 0°-27'-11 behind sun end -1410 May 28 j 16:29 22°**8**45'37 min. Earth dist. -1417 Oct 29 j 22:26 24° Υ 06'42 18.32243 AU max. Earth dist. -1410 May 27 j 12:54 22°841'30 19.85509 AU -1416 Jan 12 j 08:39 22°**Y**06'41 -1410 Sep 15 j 09:48 27°802'34 direct retrograde opposition -1410 Nov 28 j 15:50 25°800'10 0°-1'-44 -1410 Nov 29 j 10:12 24°\(\begin{align*} \begin{align*} 24°\(\begin{align*} \begin{align*} 58'11 & 17.82042 AU \end{align*} \] -1416 Apr 30 j 02:28 26° **Y** 14'59 0°-23'-6 min. Earth dist. conjunction -1409 Feb 11 j 15:28 22°856'28 -1416 Apr 30 j 02:28 26°**Y**14'59 0°23'05 minimum elong direct max. Earth dist. -1416 Apr 29 j 17:52 26°**Y**13'44 20.28793 AU -1409 May 11 j 08:06 25°**8**57'00 asc. node -1416 Jul 16 j 22:33 -1409 Jun 01 j 10:52 27°**8**12'31 19.78652 AU 0° 8 max. Earth dist. -1416 Aug 18 j 21:36 0°**8**27'52 retrograde -1409 Jun 02 j 09:36 27°**8**15'57 0°00'13 -1416 Sep 21 j 05:06 30°R**Y** conjunction -1409 Jun 02 j 09:36 27°**8**15'57 -1416 Nov 02 j 04:44 28°**Υ**26'24 0°-23'-57 opposition minimum elong 0°00'16 min. Earth dist. -1416 Nov 02 j 12:59 28°**Υ**25'31 18.25269 AU behind sun begin -1409 Jun 02 j 02:52 27°**8**14'57 direct -1415 Jan 15 j 19:48 26°**Y**25'25 behind sun end -1409 Jun 02 j 16:20 27°**8**16'56 -1415 Apr 24 j 21:50 0° 8 -1409 Jul 21 j 00:31 0°**Ⅱ** retrograde -1409 Sep 20 j 06:16 1°**Ⅲ**34'40 -1415 May 04 j 21:31 0°**8**35'17 0°-20'-5 -1409 Nov 22 j 13:54 30°R8 conjunction -1415 May 04 j 21:31 0°835'17 0°20'06 opposition minimum elong max. Earth dist. -1415 May 04 j 11:05 0°**と**33'45 20.21730 AU min. Earth dist. -1409 Dec 04 j 02:55 29°\begin{align*} 29°\begin{align*} 230'07 17.75334 AU retrograde -1415 Aug 23 j 15:17 4°**8**49'03 direct -1408 Feb 16 j 10:54 27°**8**28'03 2°**8**47'27 0°-20'-32 -1408 May 06 j 14:45 opposition -1415 Nov 06 i 16:49 $0^{\circ}II$ 2°846'28 18.18114 AU -1408 Jun 05 i 10:49 min. Earth dist. -1415 Nov 07 i 02:05 max. Earth dist. 1°**Д**45'33 19.72092 AU -1414 Jan 20 i 09:41 0°846'03 direct -1408 Jun 06 i 10:15 1°**II**49'07 0°03'51 conjunction -1408 Jun 06 i 10:15 -1414 May 09 j 17:35 4°**8**57'30 0°-16'-57 minimum elong 1°**Ⅱ**49'07 0°03'52 conjunction -1414 May 09 i 17:35 4°857'30 0°16'57 behind sun begin -1408 Jun 06 i 03:32 1°**Ⅱ**48′07 minimum elong max. Earth dist. -1414 May 09 j 04:15 4°855'32 20.14498 AU behind sun end -1408 Jun 06 i 16:58 1°**I**I50′06 retrograde -1414 Aug 28 j 07:48 9°812'08 retrograde -1408 Sep 24 j 02:15 6°**Ⅱ**08'36 -1414 Nov 11 i 05:37 -1408 Dec 07 j 01:35 4°**Д**06'02 0°06'11 opposition 7°**8**10'22 0°-16'-59 opposition 4°**Д**03'48 17.68958 AU -1408 Dec 07 j 21:57 min. Earth dist. -1414 Nov 11 j 17:51 7°**と**09'04 18.10832 AU min. Earth dist. direct -1413 Jan 24 j 22:49 5°808'31 direct -1407 Feb 20 j 04:59 2°**Ⅱ**01'33 max. Earth dist. -1407 Jun 10 j 10:02 6°**II**20'18 19.65907 AU -1413 May 14 j 14:33 9°**8**21'34 0°-13'-41 conjunction -1413 May 14 j 14:33 9°**8**21'34 0°13'42 conjunction -1407 Jun 11 j 11:21 6°**Ⅲ**24'10 0°07'25 minimum elong -1413 May 14 j 11:06 9°**8**21'04 -1407 Jun 11 j 11:21 6°**Ⅱ**24'10 0°07'26 behind sun begin minimum elong 9°**8**22'04 -1407 Jun 11 j 05:11 6°**Ⅲ**23'15 behind sun end -1413 May 14 j 18:00 behind sun begin max. Earth dist. -1413 May 13 j 23:14 9°**8**19'18 20.07187 AU behind sun end -1407 Jun 11 j 17:31 6°**Ⅲ**25′05 retrograde -1413 Sep 02 j 02:20 13°**8**37'03 retrograde -1407 Sep 28 j 23:55 10°**Ⅱ**44′25 opposition -1413 Nov 15 j 19:02 11°**8**35'07 0°-13'-18 opposition -1407 Dec 11 j 19:40 8°**Ⅱ**41'48 0°10'09 min. Earth dist. -1413 Nov 16 j 08:06 11°**8**33'43 18.03501 AU min. Earth dist. -1407 Dec 12 j 16:21 8°**Д**39'33 17.62968 AU direct -1412 Jan 29 j 14:31 9°**8**32'47 -1406 Feb 25 j 02:21 6°**Ⅲ**37'01 direct

Attention, astronomical year style is used: The year -1406 in astronomical counting style is the year 1407 BCE in historical counting style.

-1406 Jun 16 j 13:28 11°**II**01'10 0°10'56 conjunction -1406 Jun 16 j 13:28 11°**II**01'10 0°10'58 minimum elong -1406 Jun 16 j 08:25 11°**Д**00'24 behind sun begin -1406 Jun 16 j 18:30 11°**Д**01'55 behind sun end -1406 Jun 15 j 12:01 10° **II** 57'16 19.60103 AU max. Earth dist. -1406 Oct 03 j 21:08 15°**Ⅲ**22'06 retrograde -1406 Dec 16 j 14:35 13° **II** 19'31 0°14'05 opposition -1406 Dec 17 j 12:43 13°**II**17'06 17.57364 AU min. Earth dist. -1405 Mar 01 j 22:25 11°**Ⅱ**14'28 direct -1405 Jun 21 j 16:02 15°**Ⅱ**40'05 0°14'26 conjunction -1405 Jun 21 j 16:02 15°**II**40'05 0°14'27 minimum elong -1405 Jun 21 j 13:14 15°**Д**39'39 behind sun begin -1405 Jun 21 j 18:51 15°**Ⅲ**40'30 behind sun end -1405 Jun 20 j 12:35 15° **II** 35'51 19.54699 AU max. Earth dist. -1405 Oct 08 j 19:57 20°**Д**01'43 retrograde -1405 Dec 21 j 10:25 17°**Ц**59'09 0°17'57 opposition min. Earth dist. -1405 Dec 22 j 09:05 17°**II**56'40 17.52161 AU direct -1404 Mar 05 j 21:53 15°**Ⅲ**53'50 conjunction -1404 Jun 25 j 19:12 20°**Ⅲ**20'51 0°17'51 minimum elong -1404 Jun 25 j 19:12 20°**Ⅲ**20'51 0°17'54 max. Earth dist. -1404 Jun 24 j 16:02 20° **II** 16'39 19.49672 AU retrograde -1404 Oct 12 j 18:37 24°**Д**43'05 opposition -1404 Dec 25 j 07:11 22° II 40'35 0°21'44 min. Earth dist. -1404 Dec 26 j 06:51 22°**I**I37'59 17.47322 AU -1403 Mar 10 j 20:35 20°**Ⅲ**35'02 direct -1403 Jun 30 j 22:51 25°**Ⅲ**03'20 0°21'11 conjunction -1403 Jun 30 j 22:50 25° **II** 03'20 0°21'12 minimum elong -1403 Jun 29 j 17:39 24° **II** 58'48 19.45017 AU max. Earth dist. -1403 Oct 17 j 18:07 29°**II**26'07 retrograde -1403 Dec 30 j 04:34 27°**II**23'37 0°25'23 opposition -1403 Dec 31 j 05:01 27°**II**20'57 17.42862 AU min. Earth dist. -1402 Mar 15 j 21:13 25°**Ⅲ**17'50 direct -1402 Jul 04 j 22:18 29°**II**42'50 19.40729 AU max. Earth dist. conjunction -1402 Jul 06 j 03:07 29°**Ⅲ**47'19 0°24'24 minimum elong -1402 Jul 06 j 03:07 29°**Д**47'19 0°24'25 -1402 Jul 09 j 12:30 0°ഇ -1402 Oct 22 j 18:42 4°510'33 retrograde opposition -1401 Jan 04 j 02:55 2°508'05 0°28'53 min. Earth dist. -1401 Jan 05 j 03:51 2°505'22 17.38759 AU direct -1401 Mar 20 j 22:14 0°502'05 max. Earth dist. -1401 Jul 10 j 00:59 4°527'51 19.36818 AU -1401 Jul 11 j 07:25 4°\$32'36 0°27'27 conjunction -1401 Jul 11 j 07:25 4°\$32'36 0°27'28 minimum elong -1401 Oct 27 j 18:34 8°556'12 retrograde -1400 Jan 09 i 01:57 opposition 6°953'44 0°32'12 min. Earth dist. -1400 Jan 10 i 03:36 6°950'56 17.35065 AU direct -1400 Mar 24 j 23:13 4°9547'30 max. Earth dist. -1400 Jul 14 j 06:18 9°514'17 19.33334 AU -1400 Jul 15 j 12:02 conjunction 9°518'56 0°30'19 -1400 Jul 15 j 12:02 minimum elong 9°**©**18'56 0°30'20 retrograde -1400 Oct 31 j 20:36 13°542'48

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style. -1400 Jan 09 i 01:57 6°953'44 0°32'12 max. Earth dist. -1393 Aug 18 j 16:09 12° Ω51'10 19.24730 AU opposition -1400 Jan 10 j 03:36 -1393 Sep 22 j 18:33 15°Ω min. Earth dist. 6°950'56 17.35065 AU -1400 Mar 24 j 23:13 -1393 Dec 04 j 22:24 $17^{\circ}\Omega$ 18'30 direct 4°9547'30 retrograde -1400 Jul 14 j 06:18 9°514'17 19.33334 AU max. Earth dist. opposition min. Earth dist. -1400 Jul 15 j 12:02 -1392 Feb 22 j 18:14 15°R**Ω** conjunction 9°518'56 0°30'19 -1400 Jul 15 j 12:02 minimum elong 9°9518'56 0°30'20 direct -1392 May 03 j 05:54 13°**Ω**09'30 -1392 Jul 08 j 23:40 15°**Ω** retrograde -1400 Oct 31 j 20:36 13°542'48 0°35'18 opposition -1399 Jan 13 j 01:31 11°5640'21 min. Earth dist. -1399 Jan 14 j 02:57 11°537'33 17.31804 AU conjunction -1392 Aug 23 j 18:27 17° Ω42'46 0°44'25 direct -1399 Mar 30 j 02:00 9°**©**33'54 minimum elong -1392 Aug 23 j 18:27 17° **Ω**42'46 0°44'26 -1392 Aug 22 j 19:28 17°**Ω**39'08 19.26177 AU max. Earth dist. -1399 Jul 19 j 10:03 14°501'17 19.30310 AU max. Earth dist. -1392 Dec $08 \text{ j } 23.59 \quad 22^{\circ} \Omega 06'03$ retrograde conjunction -1399 Jul 20 j 16:34 14°506'05 0°32'59 opposition -1391 Feb 20 j 14:32 20°**Ω**03'57 0°49'51 minimum elong -1399 Jul 20 j 16:34 14°506'05 0°33'01 min. Earth dist. -1391 Feb 21 j 09:27 20°**Ω**01'55 17.27173 AU retrograde -1399 Nov 05 j 20:01 18°930'09 direct -1391 May 08 j 11:27 17°**Ω**57'23 opposition -1398 Jan 18 j 01:45 16°527'41 0°38'09 min. Earth dist. -1398 Jan 19 j 03:52 16°524'49 17.29039 AU conjunction -1391 Aug 28 j 20:39 22° **Ω**30'15 0°44'53 direct -1398 Apr 04 j 03:27 14°521'02 minimum elong -1391 Aug 28 j 20:39 $22^{\circ}\Omega$ 30'15 $0^{\circ}44'55$ max. Earth dist. -1391 Aug 28 j 00:18 $22^{\circ}\Omega$ 27'01 19.28238 AU conjunction -1398 Jul 25 j 21:11 18°\$53'50 0°35'26 retrograde -1391 Dec 13 j 23:37 $26^{\circ}\Omega 53'08$ minimum elong -1398 Jul 25 j 21:11 18°\$53'50 0°35'27 opposition -1390 Feb 25 i 17:31 $24^{\circ}\Omega$ 51'13 0° 50'12 max. Earth dist. -1398 Jul 24 i 15:31 18°549'10 19.27806 AU min. Earth dist. -1390 Feb 26 j 11:54 $24^{\circ}\Omega 49'14$ 17.29515 AU retrograde -1398 Nov 10 j 22:08 23°518'00 direct -1390 May 13 j 15:06 $22^{\circ}\Omega 44'53$ opposition -1397 Jan 23 i 02:23 21°5515'30 0°40'45 -1397 Jan 24 j 03:31 21°S12'45 17.26804 AU -1390 Sep 02 j 22:04 $27^{\circ}\Omega 17'10 0^{\circ}45'02$ min. Earth dist. conjunction -1397 Apr 09 j 08:04 19°508'43 minimum elong -1390 Sep 02 j 22:04 $27^{\circ}\Omega 17'10 0^{\circ}45'03$ direct -1397 Jul 29 j 20:13 23°\$37'19 19.25860 AU max. Earth dist. -1390 Sep 02 j 02:21 27° Ω 14'02 19.30860 AU max. Earth dist. -1390 Oct 18 j 20:06 0° Mp 1°M/39'38 -1397 Jul 31 j 01:35 23°541'57 0°37'37 -1390 Dec 19 j 00:44 retrograde conjunction -1397 Jul 31 j 01:35 23°5641'57 -1389 Feb 22 j 05:33 30°R**Ω** minimum elong -1397 Nov 15 j 21:03 28°506'09 opposition -1389 Mar 02 j 20:30 29°**Ω**37'52 0°50'11 retrograde -1396 Jan 28 j 03:41 26°503'38 0°43'04 min. Earth dist. -1389 Mar 03 j 12:42 29°Ω36'08 17.32396 AU opposition -1396 Jan 29 j 05:09 26°500'51 17.25176 AU -1389 May 18 j 20:02 $27^{\circ}\Omega$ 31'47 min. Earth dist. direct -1396 Apr 13 j 10:41 23°556'43 -1389 Aug 05 j 07:13 direct 0°**m** -1396 Aug 03 j 01:14 28°\$25'46 19.24553 AU max. Earth dist. -1389 Sep 07 j 23:05 2° m 03'21 0°44'53 conjunction conjunction -1396 Aug 04 j 05:32 28°530'15 0°39'33 minimum elong -1389 Sep 07 j 23:05 2° Mp 03'21 0°44'54 -1396 Aug 04 j 05:32 28°530'15 0°39'35 max. Earth dist. -1389 Sep 07 j 06:14 2° 1000'41 19.33988 AU minimum elong -1396 Aug 28 j 07:26 $0^{\circ}\Omega$ retrograde -1389 Dec 24 j 00:14 6° m 25'17 retrograde -1396 Nov 19 j 22:44 2°**£**54′23 -1388 Mar 06 j 23:34 4° m 23'41 0°49'50 opposition -1395 Feb 01 j 05:12 0°Ω51'53 0°45'04 min. Earth dist. -1388 Mar 07 j 14:46 4° m/22'04 17.35752 AU opposition min. Earth dist. -1395 Feb 02 j 04:55 0°**Ω**49'17 17.24191 AU direct -1388 May 22 j 23:38 2° m 17'53 -1395 Feb 21 j 14:44 30°Rூ -1395 Apr 18 j 16:46 28°544'55 -1388 Sep 11 j 23:08 6° Mp 48'35 0°44'25 direct conjunction -1388 Sep 11 j 23:08 -1395 Jun 11 j 23:12 $0^{\circ}\Omega$ minimum elong 6° m 48'35 0°44'25 max. Earth dist. -1395 Aug 08 j 06:27 3°**Ω**14'19 19.23904 AU max. Earth dist. -1388 Sep 11 i 06:57 6° m 46'01 19.37573 AU retrograde -1388 Dec 28 i 00:29 11° m 09'57 conjunction -1395 Aug 09 i 09:25 3°Ω18'35 0°41'12 opposition -1387 Mar 12 j 02:25 9° m 08'29 0°49'08 -1395 Aug 09 j 09:25 3°Ω18'35 0°41'13 min. Earth dist. -1387 Mar 12 j 15:39 9° 17.39548 AU minimum elong -1395 Nov 24 j 21:23 7°Ω42'35 direct -1387 May 28 j 03:37 7° m 02'56 retrograde -1394 Feb 06 i 07:07 5°Ω40'08 0°46'46 opposition -1394 Feb 07 j 06:51 5°**Ω**37'32 17.23897 AU -1387 Sep 16 j 22:40 11° mp 32'40 0°43'39 min. Earth dist. conjunction direct -1394 Apr 23 j 19:58 3°**Ω**33'09 minimum elong -1387 Sep 16 j 22:41 11° mp 32'40 0°43'39 -1394 Aug 13 j 10:50 max. Earth dist. 8°**Ω**02'42 19.23969 AU max. Earth dist. -1387 Sep 16 j 09:20 11° Mp 30'33 19.41569 AU -1386 Jan 01 j 23:17 15° Mp 53'22retrograde conjunction -1394 Aug 14 j 12:53 8°Ω06'50 0°42'35 opposition -1386 Mar 17 j 05:03 13° **m** 52'02 0°48'06 -1394 Aug 14 j 12:53 8°**Ω**06'50 0°42'36 -1386 Mar 17 j 16:48 13° m 50'47 17.43724 AU minimum elong min. Earth dist. -1394 Nov 29 j 23:11 12° Ω 30'39 -1386 Jun 02 j 07:16 11° Mp 46'48 retrograde direct -1393 Feb 11 j 09:20 $10^{\circ}\Omega$ 28'17 $0^{\circ}48'08$ opposition -1386 Sep 21 j 21:14 16° mp 15'23 0°42'35 min. Earth dist. -1393 Feb 12 j 06:50 $10^{\circ}\Omega$ 25'57 17.24309 AU conjunction direct -1393 Apr 29 j 02:22 8°**£**21′23 minimum elong -1386 Sep 21 j 21:14 16° mp 15'23 0°42'36 max. Earth dist. -1386 Sep 21 j 08:50 16° Mp 13'26 19.45943 AU conjunction -1393 Aug 19 j 15:55 12° Ω54'56 0°43'39 retrograde -1385 Jan 06 j 22:06 20° m 35'23 minimum elong -1393 Aug 19 j 15:54 12°**€**54'56 0°43'40 opposition -1385 Mar 22 j 07:30 18° m 34'08 0°46'45

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•			•	/ /	1386 BCE in historical		ge 2
min. Earth dist.	-1385 Mar 22 j 17:27	-		conjunction	-1377 Nov 01 j 13:33		
	-1385 Jun 07 j 10:36		17.46260 AU	minimum elong	-1377 Nov 01 j 13:33		0°22'30
direct	-1363 Juli 0/ J 10.30	10 11/2911		Č	3		
· · · · · · · · · · · ·	1205 0 26: 10.52	200 m. 5 (122	0041115	max. Earth dist.	-1377 Nov 01 j 22:04		20.01313 AU
conjunction	-1385 Sep 26 j 18:52			. 1	-1377 Dec 19 j 01:35	0°M	
minimum elong	-1385 Sep 26 j 18:52	-•		retrograde	-1376 Feb 17 j 01:03	1°M30'43	
max. Earth dist.	-1385 Sep 26 j 09:24	-•	19.50694 AU		-1376 Apr 21 j 03:54	30° ₹ Ω	0022110
retrograde	-1384 Jan 11 j 19:28	-•	0045105	opposition min. Earth dist.	-1376 May 03 j 04:57	29° ₽ 30'36	
opposition	-1384 Mar 26 j 09:30				-1376 May 02 j 18:47		18.04958 AU
min. Earth dist.	-1384 Mar 26 j 17:18		17.53202 AU	direct	,	27° £ 29'12	
direct	-1384 Jun 11 j 14:27	21°Mp09'59			-1376 Oct 07 j 08:21	0° M	
conjunction	-1384 Sep 30 j 15:32	25° m 35'58	0°39'38	conjunction	-1376 Nov 05 j 03:02	1°ML42'39	0°19'27
minimum elong	-1384 Sep 30 j 15:33		0°39'39	minimum elong	-1376 Nov 05 j 03:02	1°ML42'39	0°19'26
max. Earth dist.	-1384 Sep 30 j 07:31		19.55799 AU	max. Earth dist.	-1376 Nov 05 j 13:57	1° ML 44'18	20.08644 AU
retrograde	-1383 Jan 15 j 16:11	29° m 54'23		retrograde	-1375 Feb 20 j 16:19	5°M54'06	
opposition	-1383 Mar 31 j 10:52		0°43'09	opposition	-1375 May 08 j 01:26	3°M54'09	0°19'50
min. Earth dist.	-1383 Mar 31 j 17:05	-•	17.58497 AU	min. Earth dist.	-1375 May 07 j 14:35		18.12296 AU
direct	-1383 Jun 16 j 16:24			direct	-1375 Jul 24 i 02:40	1°ML53'12	
	-1383 Oct 01 j 21:06	-•			,		
	J			conjunction	-1375 Nov 09 j 15:41	6°ML05'01	0°16'18
conjunction	-1383 Oct 05 j 11:19	0° ≏ 13'31	0°37'47	minimum elong	-1375 Nov 09 j 15:41	6°ML05'01	0°16'17
minimum elong	-1383 Oct 05 j 11:19	0° ჲ 13'31	0°37'46	behind sun begin	-1375 Nov 09 j 15:28	6°ML05'00	
max. Earth dist.	-1383 Oct 05 j 06:07	0° £ 12'42	19.61285 AU	behind sun end	-1375 Nov 09 j 15:54	6°ML05'03	
retrograde	-1382 Jan 20 j 12:07	4° £ 31'05		max. Earth dist.	-1375 Nov 10 j 03:48	6°ML06'52	20.15969 AU
opposition	-1382 Apr 05 j 11:51	2° ₽ 30'04	0°40'56	retrograde	-1374 Feb 25 j 08:58	10°ML15'36	
min. Earth dist.	-1382 Apr 05 j 15:15	2° ≏ 29'43	17.64158 AU	opposition	-1374 May 12 j 21:14	8°M15'48	0°16'17
direct	-1382 Jun 21 j 19:21	0° Ω 26'04		min. Earth dist.	-1374 May 12 j 07:39	8°MJ7'11	18.19582 AU
	v			direct	-1374 Jul 28 j 22:31	6°ML15'18	
conjunction	-1382 Oct 10 j 05:54	4° ≙ 49'07	0°35'42				
minimum elong	-1382 Oct 10 j 05:54	4° ≏ 49'07	0°35'42	conjunction	-1374 Nov 14 j 03:32	10°M25'30	0°13'04
max. Earth dist.	-1382 Oct 10 j 02:50	4° ≏ 48'38	19.67141 AU	minimum elong	-1374 Nov 14 j 03:31	10°M25'30	0°13'04
retrograde	-1381 Jan 25 j 06:57	9° ჲ 05'50		behind sun begin	-1374 Nov 13 j 23:29	10°M24'54	
opposition	-1381 Apr 10 j 12:24	7° ≏ 04'54	0°38'29	behind sun end	-1374 Nov 14 j 07:34	10°M26'06	
min. Earth dist.	-1381 Apr 10 j 14:08	7° ≏ 04'43	17.70216 AU	max. Earth dist.	-1374 Nov 14 j 18:00	10°ML27'41	20.23192 AU
direct	-1381 Jun 26 j 19:17	5° ≏ 01'16		retrograde	-1373 Mar 01 j 23:11	14°ML35'14	
				opposition	-1373 May 17 j 16:27	12°M35'32	0°12'39
conjunction	-1381 Oct 14 j 23:41	9° ≏ 22'45	0°33'24	min. Earth dist.	-1373 May 17 j 02:18	12°M36'59	18.26742 AU
minimum elong	-1381 Oct 14 j 23:41	9° ≏ 22'45	0°33'24	direct	-1373 Aug 02 j 15:30	10°MJ35'27	
max. Earth dist.	-1381 Oct 14 j 23:18	9° ≏ 22'42	19.73395 AU				
retrograde	-1380 Jan 30 j 02:08	13° ≏ 38'35		conjunction	-1373 Nov 18 j 14:39	14°M44'03	0°09'48
opposition	-1380 Apr 14 j 12:05	11° ≏ 37'47	0°35'49	minimum elong	-1373 Nov 18 j 14:39	14°M44'03	0°09'46
min. Earth dist.	-1380 Apr 14 j 10:36	11° ≏ 37'57	17.76644 AU	behind sun begin	-1373 Nov 18 j 09:15	14°ML43'15	
direct	-1380 Jun 30 j 20:07	9° ॒ 34'33		behind sun end	-1373 Nov 18 j 20:03	14°M44'50	
				max. Earth dist.	-1373 Nov 19 j 05:52	14°M46'20	20.30272 AU
conjunction	-1380 Oct 18 j 16:29	13° ≏ 54'28	0°30'55		-1373 Nov 23 j 00:11	15°ML	
minimum elong	-1380 Oct 18 j 16:29	13° ≏ 54'28	0°30'55	retrograde	-1372 Mar 05 j 14:11	18°ML52'56	
max. Earth dist.	-1380 Oct 18 j 18:29	13° ≏ 54'46	19.79996 AU	opposition	-1372 May 21 j 10:32	16°M53'19	0°08'58
retrograde	-1379 Feb 02 j 19:40	18° ≏ 09'26		min. Earth dist.	-1372 May 20 j 18:02	16°M55'00	18.33730 AU
opposition	-1379 Apr 19 j 11:20	16° ≏ 08'47	0°32'56		-1372 Jul 21 j 10:06	15°RM	
min. Earth dist.	-1379 Apr 19 j 08:27	16° ≏ 09'05	17.83406 AU	direct	-1372 Aug 06 j 09:09	14°M53'36	
direct	-1379 Jul 05 j 17:13	14° ≏ 05'59			-1372 Aug 22 j 03:56	15°M	
	1270 0 . 22 : 22 - 22	100 0 2 44 2	002011		1272 31 22 121 25	100 m 00000	0007120
conjunction	-1379 Oct 23 j 08:22			conjunction	-1372 Nov 22 j 01:06		0°06'29
minimum elong	-1379 Oct 23 j 08:22			minimum elong	-1372 Nov 22 j 01:06		0°06'29
max. Earth dist.	-1379 Oct 23 j 12:35		19.86905 AU	behind sun begin	-1372 Nov 21 j 18:56		
retrograde	-1378 Feb 07 j 14:29		0020152	behind sun end	-1372 Nov 22 j 07:15	19°M01'33	20.27140.411
opposition	-1378 Apr 24 j 09:46			max. Earth dist.	-1372 Nov 22 j 18:30		20.37148 AU
min. Earth dist.	-1378 Apr 24 j 03:41		17.90424 AU	retrograde	-1371 Mar 10 j 02:49	23°M08'41	10.40.500 : **
direct	-1378 Jul 10 j 16:15	18~ 11 35'34		min. Earth dist.	-1371 May 25 j 11:04		
conjugation	1270 Oct 27: 22:26	220.0 52117	0025120	opposition	-1371 May 26 j 04:02		0°05'17
conjunction	-1378 Oct 27 j 23:26			direct	-1371 Aug 11 j 01:04	17 1160943	
minimum elong	-1378 Oct 27 j 23:26			agniumation	1271 Nov. 26 : 10.21	220M 15115	0002110
max. Earth dist.	-1378 Oct 28 j 06:12		17.74029 AU	conjunction	-1371 Nov 26 j 10:31 -1371 Nov 26 j 10:31		0°03'10 0°03'09
retrograde	-1377 Feb 12 j 06:54		0°26'40	minimum elong	-	23°ML14'18	0 03 09
opposition	-1377 Apr 29 j 07:49 -1377 Apr 29 j 00:38			behind sun begin behind sun end	-1371 Nov 26 j 04:01 -1371 Nov 26 j 17:01	23°M16'12	
min. Earth dist. direct	-1377 Apr 29 j 00:38 -1377 Jul 15 j 11:24		17.77040 AU	max. Earth dist.	-1371 Nov 26 j 17:01 -1371 Nov 27 j 04:29		20.43817 ATT
direct	15/1 Jul 15 J 11.24	23 == 03 19		man. Darth Wist.	13/11NUV 2/J U4.29	23 1161/30	20.7301/AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1370 in astronomical counting style is the year 1371 BCE in historical counting style. retrograde -1370 Mar 14 j 16:21 27° ML22'29 direct -1364 Sep 09 j 15:55 18° ₹ 13'01 -1370 May 30 j 20:36 25° ML22'59 0°01'35 opposition min. Earth dist. -1370 May 30 j 01:25 25° ML 24'55 18.47069 AU conjunction -1364 Dec 24 j 12:19 22° ₹ 09'45 0°-19'-4 -1370 Aug 15 j 16:30 23°M23'54 -1364 Dec 24 j 12:19 22° ₹ 09'45 0°19'07 direct minimum elong -1364 Dec 25 j 15:46 22° ₹ 13'45 20.85066 AU -1370 Nov 06 j 01:31 26° ML01'08 desc. node max. Earth dist. -1363 Apr 12 j 17:19 26° ₹ 12'38 retrograde -1370 Nov 30 j 19:23 27° ML27'54 0°00'-13 -1363 Jun 29 j 18:36 24° **₹** 13'36 0°-22'-41 conjunction opposition -1370 Nov 30 j 19:23 27°M27'54 -1363 Jun 28 j 16:22 24° ₹ 16'13 18.87561 AU minimum elong 0°00'15 min. Earth dist. -1363 Sep 14 j 01:10 22° ₹ 16'39 behind sun begin -1370 Nov 30 j 12:55 27°M26'58 direct behind sun end -1370 Dec 01 j 01:51 27° ML 28'51 max. Earth dist. -1370 Dec 01 j 15:44 27° M 30'56 20.50279 AU conjunction -1363 Dec 28 j 17:39 26° ₹ 12'26 0°-21'-55 -1369 Jan 15 j 12:45 -1363 Dec 28 j 17:39 26° ₹12'26 0°21'57 0°**∡**¹ minimum elong -1369 Mar 19 j 03:29 -1363 Dec 29 j 20:43 26° ₹ 16'22 20.89913 AU retrograde 1°**х** 34′21 max. Earth dist. -1369 May 25 j 01:16 30°RM -1362 Mar 23 j 10:03 0°궁 opposition -1369 Jun 04 j 12:22 29°MJ34'53 0°-2'-4 retrograde -1362 Apr 17 j 03:31 0°る14'56 min. Earth dist. -1369 Jun 03 j 16:32 29°M 36'53 18.53445 AU -1362 May 12 j 06:31 30°₹**҂**7 direct -1369 Aug 20 j 07:00 27°M36'06 min. Earth dist. -1362 Jul 03 j 02:40 28° ₹ 18'39 18.92218 AU -1369 Nov 06 j 16:25 opposition -1362 Jul 04 j 05:31 28° ₹ 15'59 0°-25'-45 direct -1362 Sep 18 j 08:53 26°**х** 19'17 conjunction -1369 Dec 05 j 03:26 1°**∡**38'41 0°-3'-34 -1362 Dec 28 j 20:57 minimum elong -1369 Dec 05 j 03:24 1°**×**38'41 0°03'37 behind sun begin -1369 Dec 04 i 20:56 1°**∡**³37'45 conjunction -1361 Jan 01 i 23:05 0°る14'14 0°-24'-38 behind sun end -1369 Dec 05 i 09:53 1°**х** 39'37 minimum elong -1361 Jan 01 i 23:05 0°る14'14 0°24'40 max. Earth dist. -1369 Dec 06 i 00:14 1° ₹ 41'47 20.56570 AU max. Earth dist. -1361 Jan 03 i 03:36 0°る18'22 20.94343 AU retrograde -1368 Mar 22 j 15:54 5°**∡**144'24 retrograde -1361 Apr 21 j 11:31 4°る16'21 -1368 Jun 07 j 05:20 3°**∡**747'09 18.59656 AU -1361 Jul 08 j 15:42 2°**ප**17'29 0°-28'-42 min. Earth dist. opposition opposition -1368 Jun 08 j 03:12 3°**∡**¹44'57 0°-5'-42 -1361 Jul 07 j 12:55 2°る20'09 18.96419 AU min Earth dist -1368 Aug 23 j 20:09 1°**х** 46′28 -1361 Sep 22 j 17:14 0°**ප**21'01 direct direct 5°**₹**47'43 0°-6'-48 -1360 Jan 06 j 04:14 -1368 Dec 08 j 10:59 4°る15'11 0°-27'-14 conjunction conjunction -1368 Dec 08 j 10:58 5°**х** 47'43 0°06'51 -1360 Jan 06 j 04:14 minimum elong 4°る15'11 0°27'17 minimum elong -1368 Dec 08 j 04:53 5°**х** 46′50 -1360 Jan 07 j 07:45 4°る19'09 20.98300 AU behind sun begin max. Earth dist. -1368 Dec 08 j 17:04 5°**х**⁴48'36 -1360 Apr 24 j 20:43 behind sun end 8°**る**16'59 retrograde -1360 Jul 10 j 22:41 6°る20'48 19.00125 AU -1368 Dec 09 j 10:07 5°**∡**751'08 20.62681 AU max. Earth dist. min. Earth dist. -1367 Mar 27 j 01:44 9°**х** 52'45 -1360 Jul 12 j 01:28 6°る18'08 0°-31'-29 retrograde opposition -1367 Jun 12 j 17:15 7°**₹**53'22 0°-9'-16 -1360 Sep 25 j 23:39 4°る21'50 opposition direct 7°**∡**755'38 18.65685 AU min. Earth dist. -1367 Jun 11 j 18:41 direct -1367 Aug 28 j 08:50 5°**х** 55′12 conjunction -1359 Jan 09 j 09:21 8°る15'19 0°-29'-41 minimum elong -1359 Jan 09 j 09:21 8°る15'19 0°29'43 conjunction -1367 Dec 12 j 17:53 9° \$\square\$ 55'11 0°-9'-59 max. Earth dist. -1359 Jan 10 j 13:51 8°る19'25 21.01722 AU -1367 Dec 12 j 17:53 9°**∡**′55'11 0°10'01 retrograde -1359 Apr 29 j 04:30 12°♂16'50 minimum elong -1367 Dec 12 j 12:34 9°**∡**754'25 min. Earth dist. -1359 Jul 15 j 08:05 10° ₹20'37 19.03269 AU behind sun begin behind sun end -1367 Dec 12 j 23:12 9°**х** 55′57 -1359 Jul 16 j 10:40 10°♂17'59 0°-34'-7 opposition max. Earth dist. -1367 Dec 13 j 17:19 9°**尽**58'38 20.68626 AU direct -1359 Sep 30 j 07:22 8°₹21'48 -1366 Mar 31 j 13:30 13°**尽** 59'36 retrograde -1366 Jun 16 j 06:20 12° ₹ 02'43 18.71542 AU -1358 Jan 13 i 14:14 12°**♂**14'39 0°-31'-59 min. Earth dist. conjunction -1366 Jun 17 j 06:38 12°**₹**00'17 -1358 Jan 13 j 14:14 12°る14'39 0°32'02 opposition 0°-12'-45 minimum elong -1366 Sep 01 j 19:55 10° **₹** 02'25 -1358 Jan 14 j 17:25 12°る18'34 21.04596 AU direct max. Earth dist. -1358 May 03 j 13:04 16°る15'55 retrograde -1366 Dec 17 i 00:23 14° ₹ 01'14 0°-13'-5 opposition -1358 Jul 20 i 19:26 14° ₹ 17'01 0°-36'-34 conjunction -1366 Dec 17 i 00:22 14° ₹01'14 0°13'08 min. Earth dist. -1358 Jul 19 j 17:11 14°る19'38 19.05875 AU minimum elong -1366 Dec 16 j 20:23 14° ₹ 00'40 direct -1358 Oct 04 j 13:17 12°る20'53 behind sun begin behind sun end -1366 Dec 17 j 04:22 14° ₹01'48 -1366 Dec 18 j 02:02 14° ₹ 05'00 20.74367 AU max. Earth dist. conjunction -1357 Jan 17 j 19:08 16° ₹ 13'12 0°-34'-8 retrograde -1365 Apr 04 j 22:15 18° ₹ 05'05 minimum elong -1357 Jan 17 j 19:08 16°정13'12 0°34'10 0°-16'-10 opposition -1365 Jun 21 j 19:21 16°**尽** 05'52 max. Earth dist. min. Earth dist. -1365 Jun 20 j 18:29 16°**尽** 08'21 18.77167 AU retrograde -1357 May 07 j 20:23 20°♂14'14 -1365 Sep 06 j 06:42 14° ₹ 08'20 direct min. Earth dist. opposition -1365 Dec 21 j 06:28 18° ₹ 06'03 0°-16'-8 -1357 Oct 08 j 19:49 16°**3**19'10 conjunction direct -1365 Dec 21 j 06:27 18°**✗** 06'03 0°16'09 minimum elong behind sun begin -1365 Dec 21 j 05:44 18° ₹ 05'56 conjunction -1356 Jan 21 j 23:49 20° ₹ 10'59 0°-36'-5 behind sun end -1365 Dec 21 j 07:11 18° ₹ 06'09 minimum elong -1356 Jan 21 j 23:49 20°る10'59 0°36'08 max. Earth dist. -1365 Dec 22 j 08:03 18° ₹ 09'47 20.79868 AU max. Earth dist. -1356 Jan 23 j 02:29 20°**궁**14'48 21.08740 AU retrograde -1364 Apr 08 j 09:22 22°**尽** 09'23 retrograde -1356 May 11 j 04:23 24°쥥11'52 -1364 Jun 24 j 05:14 20° ₹ 12'51 18.82533 AU -1356 Jul 27 j 09:45 22° 중15'20 19.09518 AU min. Earth dist. min. Earth dist.

opposition

-1356 Jul 28 j 11:12 22° 중12'47 0°-40'-53

-1364 Jun 25 j 07:12 20° ₹ 10'16 0°-19'-29

opposition

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-	nical year style is used: Tl			//		/ 1	ge 4
direct	-1356 Oct 12 j 01:15		in astronomical co	retrograde	-1348 Jun 12 j 19:54		
direct	-1330 Oct 12 j 01.13	20 01041		opposition	-1348 Aug 29 j 14:33		0°-49'-48
conjunction	-1355 Jan 25 j 04:35	24°₹08'09	0°-37'-52	min. Earth dist.	-1348 Aug 28 j 19:14		
minimum elong	-1355 Jan 25 j 04:35			direct	-1348 Nov 12 j 11:18		17.07270710
max. Earth dist.	-1355 Jan 26 j 08:07				15 10 110	21 1001 10	
retrograde	-1355 May 15 j 11:26		21.10090110	conjunction	-1347 Feb 26 i 01:28	25°≈43'57	0°-45'-9
opposition	-1355 Aug 01 j 18:28		0°-42'-45	minimum elong	-1347 Feb 26 j 01:28		0°45'11
min. Earth dist.	-1355 Jul 31 j 17:08			max. Earth dist.	-1347 Feb 26 j 22:53		
direct	-1355 Oct 16 j 06:34			retrograde	-1347 Jun 17 j 04:50		
	,			opposition	-1347 Sep 02 j 20:37		0°-49'-53
conjunction	-1354 Jan 29 j 09:06	28° る 04'49	0°-39'-28	min. Earth dist.	-1347 Sep 02 j 02:17		19.04934 AU
minimum elong	-1354 Jan 29 j 09:06	28° ට 04'49	0°39'30	direct	-1347 Nov 16 j 16:24		
max. Earth dist.	-1354 Jan 30 j 11:20	28° පි 08'34	21.11025 AU		v		
	-1354 Mar 05 j 10:20	0° ≈		conjunction	-1346 Mar 02 j 08:55	29° ≈ 43'11	0°-45'-7
retrograde	-1354 May 19 j 19:14	2° ≈ 05'34		minimum elong	-1346 Mar 02 j 08:55	29° ≈ 43'11	0°45'08
min. Earth dist.	-1354 Aug 05 j 00:43	0° ≈ 08'47	19.11393 AU	max. Earth dist.	-1346 Mar 03 j 03:31	29° ≈ 45'50	21.03523 AU
opposition	-1354 Aug 06 j 01:27	0° ≈ 06′18	0°-44'-25		-1346 Mar 07 j 07:04	0°)	
	-1354 Aug 08 j 16:19	30°Rる		retrograde	-1346 Jun 21 j 14:36	3°) 46′04	
direct	-1354 Oct 20 j 11:13	28° ප 10'11		min. Earth dist.	-1346 Sep 06 j 10:39	1°) 48′03	19.02036 AU
	-1354 Dec 27 j 09:49	0° ≈		opposition	-1346 Sep 07 j 02:52	1°) 46′24	0°-49'-44
					-1346 Oct 31 j 22:02	30° R ≈	
conjunction	-1353 Feb 02 j 14:03	2° ≈ 01'12	0°-40'-53	direct	-1346 Nov 20 j 20:42	29° ≈ 49'48	
minimum elong	-1353 Feb 02 j 14:03	2° ≈ 01'12	0°40'55		-1346 Dec 10 j 16:53	0° ∀	
max. Earth dist.	-1353 Feb 03 j 17:02	2° ≈ 05'03	21.11562 AU				
retrograde	-1353 May 24 j 02:34	6° ≈ 01'58		conjunction	-1345 Mar 06 j 17:14	3°) 43′12	0°-44'-52
min. Earth dist.	-1353 Aug 09 j 07:24	4° ≈ 05'06	19.11734 AU	minimum elong	-1345 Mar 06 j 17:14	3°) 43′12	0°44'53
opposition	-1353 Aug 10 j 07:53	4° ≈ 02'39	0°-45'-52	max. Earth dist.	-1345 Mar 07 j 11:07	3°) 45′45	21.00344 AU
direct	-1353 Oct 24 j 16:01	2° ≈ 06'31		retrograde	-1345 Jun 25 j 23:25	7°) 46′32	
				opposition	-1345 Sep 11 j 08:56	5°) 46′45	0°-49'-21
conjunction	-1352 Feb 06 j 19:01	5° ≈ 57'29	0°-42'-6	min. Earth dist.	-1345 Sep 10 j 17:52		18.98572 AU
minimum elong	-1352 Feb 06 j 19:01	5° ≈ 57'29	0°42'07	direct	-1345 Nov 25 j 02:02	3°) 49′56	
max. Earth dist.	-1352 Feb 07 j 20:23	6° ≈ 01'05	21.11715 AU				
retrograde	-1352 May 27 j 10:21	9° ≈ 58'22		conjunction	-1344 Mar 10 j 01:50	7°) 43′59	
opposition	-1352 Aug 13 j 14:17	7° ≈ 58'59		minimum elong	-1344 Mar 10 j 01:50	7°) 43′59	
min. Earth dist.	-1352 Aug 12 j 14:42		19.11696 AU	max. Earth dist.	-1344 Mar 10 j 16:43		20.96630 AU
direct	-1352 Oct 27 j 19:26	6°≈02'50		retrograde	-1344 Jun 29 j 09:21	11°) 47′50	
				opposition	-1344 Sep 14 j 15:18	9°) 47′52	
conjunction	-1351 Feb 10 j 00:14	9° ≈ 53'52		min. Earth dist.	-1344 Sep 14 j 02:27		18.94610 AU
minimum elong	-1351 Feb 10 j 00:14	9° ≈ 53'52		direct	-1344 Nov 28 j 07:12	7° ∺ 50'47	
max. Earth dist.	-1351 Feb 11 j 02:10		21.11473 AU				
retrograde	-1351 May 31 j 18:14	13° ≈ 54'56		conjunction	-1343 Mar 14 j 10:58		
opposition	-1351 Aug 17 j 20:28	11° ≈ 55'31		minimum elong	-1343 Mar 14 j 10:58		
min. Earth dist.	-1351 Aug 16 j 21:16		19.11247 AU	max. Earth dist.	-1343 Mar 15 j 01:19		20.92438 AU
direct	-1351 Nov 01 j 00:22	9° ≈ 59'22		retrograde	-1343 Jul 03 j 18:33		
				opposition	-1343 Sep 18 j 21:42		
conjunction	-1350 Feb 14 j 05:46			min. Earth dist.	-1343 Sep 18 j 09:49		18.90193 AU
minimum elong	-1350 Feb 14 j 05:46			direct	-1343 Dec 02 j 13:16	11° 大 52'27	
max. Earth dist.	-1350 Feb 15 j 05:48		21.10832 AU		1242 M 10 : 20 42	150W 40104	00 421 47
	-1350 Mar 06 j 20:55			conjunction	-1342 Mar 18 j 20:43		0°-42'-47
retrograde	-1350 Jun 05 j 02:27		10 10207 ATT	minimum elong	-1342 Mar 18 j 20:43		0°42'49
min. Earth dist.	-1350 Aug 21 j 04:41			max. Earth dist.	-1342 Mar 19 j 08:11		20.6/833 AU
opposition	-1350 Aug 22 j 02:34		0*-48 -34	retrograde	-1342 Jul 08 j 04:18		0°-46'-42
J: 4	-1350 Sep 13 j 13:32			opposition	-1342 Sep 23 j 04:16		
direct	-1350 Nov 05 j 03:02			min. Earth dist.	-1342 Sep 22 j 18:40		18.85411 AU
	-1350 Dec 25 j 20:27	13 签		direct	-1342 Dec 06 j 18:59	13 T 34 39	
· · · · · · · · · · · ·	1240 E-k 10 : 11.52	170 - 47142	09 441 22		1241 Mar. 22 : 07.10	100W 51122	09 411 20
conjunction	-1349 Feb 18 j 11:53	17°≈47'42		conjunction	-1341 Mar 23 j 07:18		
minimum elong	-1349 Feb 18 j 11:53	17°≈47'42		minimum elong	-1341 Mar 23 j 07:18		
max. Earth dist.	-1349 Feb 19 j 12:03		21.09756 AU	max. Earth dist.	-1341 Mar 23 j 18:09		20.82885 AU
retrograde	-1349 Jun 09 j 11:01	21°≈49'20	10 00001 417	retrograde	-1341 Jul 12 j 14:52		00 451 21
min. Earth dist.	-1349 Aug 25 j 11:26		19.09081 AU	opposition	-1341 Sep 27 j 11:00		
opposition	-1349 Aug 26 j 08:34	19°≈49'53	0°-49'-28	min. Earth dist.	-1341 Sep 27 j 02:18		18.80299 AU
direct	-1349 Nov 09 j 08:09	17° ≈ 53'40		direct	-1341 Dec 11 j 01:57	19~ 大 58'34	
	1240 E 1 22 : 10 22	010 - 45100	00 44' 57		124034 2611010	2201/2010	00 401 10
conjunction	-1348 Feb 22 j 18:20		0°-44'-57	conjunction	-1340 Mar 26 j 18:18		0°-40'-19
minimum elong	-1348 Feb 22 j 18:20	21°≈45'28	0°44'59	minimum elong	-1340 Mar 26 j 18:18		0°40'20
max. Earth dist.	-1348 Feb 23 j 16:06	21*≈48'33	21.08204 AU	max. Earth dist.	-1340 Mar 27 j 02:16	25° 大 57'14	20.7/636 AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1340 in astronomical counting style is the year 1341 BCE in historical counting style. retrograde -1340 Jul 16 j 00:41 28° + 02'21 -1332 Jun 14 i 22:12 0°8 -1340 Sep 30 j 18:09 26° **)** €01'39 0°-43'-45 -1332 Aug 19 j 13:14 1°843'19 opposition retrograde min. Earth dist. -1340 Sep 30 j 11:42 26° \(\) 02'20 18.74925 AU -1332 Oct 26 j 16:59 30°RΥ -1340 Dec 14 j 08:00 24°\mathbf{H} 03'19 -1332 Nov 02 j 20:50 29°**Υ**'41'47 0°-23'-12 direct opposition -1332 Nov 03 j 05:04 29°**Υ**40'54 18.24550 AU min. Earth dist. -1331 Jan 16 j 11:56 27°**Y**'40'45 -1339 Mar 31 j 06:14 28° **★** 01'56 0°-38'-46 conjunction direct -1339 Mar 31 j 06:14 28° **米** 01'56 0°38'47 -1331 Apr 03 j 06:50 minimum elong 0°B -1339 Mar 31 j 13:35 28° **米**02'59 20.72148 AU max. Earth dist. -1339 May 05 j 20:29 $0^{\circ}\Upsilon$ -1331 May 05 j 13:25 conjunction 1°**8**50'39 0°-19'-25 -1339 Jul 20 j 12:43 2°Y08'54 -1331 May 05 j 13:25 retrograde minimum elong 1°**8**50'39 0°19'25 opposition -1339 Oct 05 j 01:32 0°**Υ**08'03 0°-41'-56 max. Earth dist. -1331 May 05 j 02:58 1°**8**49'07 20.20991 AU -1339 Oct 04 j 19:53 0°**Υ**08'39 18.69323 AU -1331 Aug 24 j 07:02 6°**8**04'29 min. Earth dist. retrograde -1331 Nov 07 j 08:49 4°802'48 0°-19'-47 -1339 Oct 08 j 06:57 30°**₹**₩ opposition direct -1339 Dec 18 j 16:03 28°\circ 09'24 min. Earth dist. -1331 Nov 07 j 18:01 4°801'49 18.17366 AU -1338 Feb 24 j 12:14 $0^{\circ}\Upsilon$ direct -1330 Jan 21 j 02:16 2°801'20 conjunction -1338 Apr 04 j 18:48 2°\bar{\gamma}09'11 0°-37'00 conjunction -1330 May 10 j 09:26 6°812'50 0°-16'-15 minimum elong -1338 Apr 04 j 18:48 2°Y09'11 0°37'01 minimum elong -1330 May 10 j 09:26 6°812'50 0°16'16 max. Earth dist. -1338 Apr 04 j 23:11 2°Υ09'49 20.66451 AU max. Earth dist. -1330 May 09 j 20:06 6°810'52 20.13756 AU retrograde -1338 Jul 24 j 23:34 6°Y16'56 retrograde -1330 Aug 28 j 22:48 10°**8**27'32 opposition -1338 Oct 09 j 09:31 4°Υ15'58 0°-39'-53 opposition -1330 Nov 11 j 21:42 8°**8**25'41 0°-16'-13 min. Earth dist. -1338 Oct 09 i 06:16 4°Υ16'18 18.63529 AU min. Earth dist. -1330 Nov 12 i 09:44 8°**8**24'24 18.10105 AU direct -1338 Dec 22 j 22:42 2°Y16'59 direct -1329 Jan 25 j 15:00 6°**8**23'46 conjunction -1337 Apr 09 i 08:28 6°Υ18'02 0°-35'-3 conjunction -1329 May 15 i 06:16 10° **8**36'52 0°-12'-59 -1337 Apr 09 j 08:28 6°Υ18'02 0°35'04 minimum elong -1329 May 15 i 06:16 10°**8**36'52 minimum elong 0°12'59 max. Earth dist. -1337 Apr 09 j 12:00 6°Υ18'33 20.60565 AU behind sun begin -1329 May 15 j 02:18 10°836'17 retrograde -1337 Jul 29 j 13:02 10°**Y**26'34 -1329 May 15 j 10:14 10°**8**37'26 behind sun end -1337 Oct 13 j 17:44 8°Υ25'31 0°-37'-37 opposition max. Earth dist. 8°**Υ**25'46 18.57542 AU -1329 Sep 02 j 18:11 14°**8**52'25 -1337 Oct 13 j 15:22 min. Earth dist. retrograde -1329 Nov 16 j 11:00 12°\(\begin{align*} \delta 50'25 & 0\) -12'-32 -1337 Dec 27 j 08:03 6°Y26'14 direct opposition -1329 Nov 16 j 23:46 12°849'03 18.02844 AU min. Earth dist. -1336 Apr 12 j 22:50 10°**Υ**'28'38 0°-32'-54 -1328 Jan 30 j 07:05 10°**8**48'02 conjunction direct -1336 Apr 12 j 22:50 10°**Y**28'38 0°32'54 -1328 May 18 j 10:40 15°**8**00'11 19.99250 AU max. Earth dist. minimum elong -1336 Apr 12 j 23:17 10°**Υ**28'42 20.54494 AU -1328 May 18 j 09:23 15°**8** max. Earth dist. -1336 Aug 02 j 01:18 14°**Υ**38'02 retrograde -1336 Oct 17 j 02:46 12°**Y**36'53 0°-35'-8 -1328 May 19 j 03:51 15°**8**02'45 0°-9'-38 opposition conjunction min. Earth dist. -1336 Oct 17 j 03:00 12° γ 36'52 18.51379 AU minimum elong -1328 May 19 j 03:50 15°**8**02'45 0°09'38 direct -1336 Dec 30 j 15:46 10°**Υ**37'18 behind sun begin -1328 May 18 j 22:17 15°**8**01'56 behind sun end -1328 May 19 j 09:24 15°**8**03'33 -1335 Apr 17 j 14:11 14°**Υ**41'07 0°-30'-33 conjunction retrograde -1328 Sep 06 j 11:02 19°**8**19'08 -1335 Apr 17 j 14:11 14°**Y**41'07 0°30'34 -1328 Nov 20 j 01:16 17°**8**17'00 0°-8'-45 minimum elong opposition max. Earth dist. -1335 Apr 17 j 13:34 14°**Υ**41'01 20.48236 AU min. Earth dist. -1328 Nov 20 j 16:31 17°**8**15'21 17.95666 AU retrograde -1335 Aug 06 j 16:22 18°**Υ**51'23 -1327 Feb 02 j 21:17 15°**8**14'09 direct -1335 Oct 21 j 12:14 16° **Y** 50'10 0°-32'-27 max. Earth dist. -1327 May 23 j 07:20 19°**8**27'40 19.92145 AU opposition -1335 Oct 21 j 13:31 16° γ 50'02 18.45008 AU min. Earth dist. -1334 Jan 04 j 02:33 14°**Υ**50'17 -1327 May 24 j 02:07 19° \(\begin{aligned}
 30'29 0°-6'-12 \end{aligned}
 \) direct conjunction -1327 May 24 j 02:06 19°**8**30'29 minimum elong -1334 Apr 22 j 06:34 18°**γ**'55'33 0°-28'-1 -1327 May 23 j 19:41 19°**8**29'32 conjunction behind sun begin minimum elong -1334 Apr 22 i 06:34 18° Υ 55'33 0°28'01 behind sun end -1327 May 24 i 08:31 19°**8**31'25 -1334 Apr 22 j 02:36 18°**Υ**54'59 20.41754 AU max. Earth dist. retrograde -1327 Sep 11 j 07:34 23°847'42 retrograde -1334 Aug 11 j 06:02 23°**Υ**'06'44 opposition -1327 Nov 24 j 16:05 21°845'25 0°-4'-53 -1334 Oct 25 j 22:25 21°Υ05'25 0°-29'-33 min. Earth dist. -1327 Nov 25 j 07:48 21°843'43 17.88645 AU opposition -1334 Oct 26 j 02:38 21° Υ 04'58 18.38415 AU min. Earth dist. direct -1326 Feb 07 j 14:47 19°842'09 -1333 Jan 08 j 12:03 19°**Υ**'05'11 direct max. Earth dist. -1326 May 28 j 04:58 23°**8**57'01 19.85213 AU -1333 Apr 27 j 00:06 23°Υ11'59 0°-25'-18 conjunction conjunction -1326 May 29 j 01:20 24°**8**00'05 0°-2'-42 -1333 Apr 27 j 00:06 23°**Υ**11'59 0°25'18 minimum elong -1326 May 29 j 01:19 24°**8**00'05 0°02'41 minimum elong -1333 Apr 26 j 18:32 23°**Y**11'11 20.35045 AU -1326 May 28 j 18:32 23°**8**59'05 max. Earth dist. behind sun begin -1333 Aug 15 j 22:28 27°**Y**24'03 -1326 May 29 j 08:06 24°**8**01'05 retrograde behind sun end -1333 Oct 30 j 09:13 25° Υ 22'38 0° -26'-28 -1326 Sep 16 j 01:40 28°8 18'06 opposition retrograde min. Earth dist. $-1333 \text{ Oct } 30 \text{ j } 14:32 \quad 25^{\circ} \Upsilon 22'04 \quad 18.31584 \text{ AU}$ opposition -1326 Nov 29 j 07:47 26° \$\begin{align*} 26° \begin{align*} 515'43 & 0°00'-58 \end{align*} direct -1332 Jan 13 j 00:34 23°**Y**22'01 min. Earth dist. -1326 Nov 30 j 01:44 26°**8**13'46 17.81841 AU direct -1325 Feb 12 j 06:59 24°**8**12'02 conjunction -1332 Apr 30 j 18:13 27°**Υ**30'22 0°-22'-26 asc. node -1325 Mar 01 j 22:19 24°**8**20'18 minimum elong -1332 Apr 30 j 18:13 27°**Y**'30'22 0°22'27 max. Earth dist. -1325 Jun 02 j 03:10 28°**8**28'14 19.78547 AU

max. Earth dist.

-1332 Apr 30 j 09:24 27°**Υ**29'04 20.28102 AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1325 in astronomical counting style is the year 1326 BCE in historical counting style. -1325 Jun 03 j 01:15 28°**8**31'35 0°00'56 min. Earth dist. -1319 Dec 31 j 21:34 28°**Д**38'12 17.43124 AU conjunction -1325 Jun 03 j 01:14 28°**8**31'34 -1318 Mar 16 j 13:33 26° **II** 35'06 minimum elong 0°00'56 direct -1325 Jun 02 j 18:27 28°\(\alpha \) 30'34 -1318 Jun 19 j 08:53 behind sun begin 0.00 -1325 Jun 03 j 08:01 28°832'34 behind sun end -1325 Jun 27 j 19:54 -1318 Jul 06 j 19:23 Π °0 conjunction 1°**©**04'31 0°24'56 -1325 Sep 20 j 23:03 -1318 Jul 06 j 19:23 retrograde 2°**I**I50′24 minimum elong 1°**9**04'31 0°24'58 -1325 Dec 04 j 00:16 0°**II**47'56 0°02'58 -1318 Jul 05 j 14:26 opposition max. Earth dist. 1°900'01 19.40944 AU -1318 Oct 23 j 10:48 -1325 Dec 04 j 18:28 min. Earth dist. 0°**Ц**45'57 17.75324 AU retrograde 5°927'42 -1317 Jan 04 j 19:23 0°29'28 -1325 Dec 22 j 20:58 30°R₩ opposition 3°**9**25'13 direct -1324 Feb 17 j 02:10 28°**8**43'53 min. Earth dist. -1317 Jan 05 j 20:29 3°522'28 17.38932 AU -1317 Mar 21 j 14:33 -1324 Apr 11 j 23:08 $0^{\circ}\Pi$ direct 1°9519'12 -1324 Jun 06 j 02:55 max. Earth dist. 3°**耳**01'32 19.72176 AU -1317 Jul 11 j 23:45 conjunction 5°9549'38 0°27'57 -1317 Jul 11 j 23:44 conjunction -1324 Jun 07 j 01:47 3°**I**05'00 0°04'31 minimum elong 5°5649'38 0°27'58 minimum elong -1324 Jun 07 j 01:46 3°**Ⅱ**05′00 0°04'33 max. Earth dist. -1317 Jul 10 j 17:10 5°9544'51 19.36955 AU behind sun begin -1324 Jun 06 j 19:06 3°**Ⅲ**04'01 retrograde -1317 Oct 28 j 11:02 10°9513'10 behind sun end -1324 Jun 07 j 08:25 3°**Ⅱ**05'59 opposition -1316 Jan 09 j 18:24 8°9510'39 0°32'44 retrograde -1324 Sep 24 j 18:23 7°**Ⅱ**24'36 min. Earth dist. -1316 Jan 10 j 20:03 8°507'51 17.35171 AU opposition -1324 Dec 07 j 17:42 5°**Ⅲ**22'05 0°06'56 direct -1316 Mar 25 j 16:10 6°9504'23 min. Earth dist. -1324 Dec 08 j 13:45 5°**Ⅱ**19'54 17.69125 AU max. Earth dist. -1316 Jul 14 j 22:31 10°531'03 19.33417 AU direct -1323 Feb 20 j 20:33 3°**I**17'43 max. Earth dist. -1323 Jun 11 j 02:22 7°**Д**36'37 19.66152 AU conjunction -1316 Jul 16 j 04:12 10°535'42 0°30'47 minimum elong -1316 Jul 16 i 04:12 10°535'42 0°30'48 conjunction -1323 Jun 12 j 03:07 7°**Ⅱ**40'24 0°08'04 retrograde -1316 Nov 01 j 11:47 14°\$59'29 -1323 Jun 12 j 03:06 7°**Ⅱ**40'24 0°08'05 opposition -1315 Jan 13 i 17:58 12°556'58 0°35'47 minimum elong -1323 Jun 11 j 21:05 7°**Ⅱ**39'30 min. Earth dist. -1315 Jan 14 j 19:27 12°554'11 17.31868 AU behind sun begin -1323 Jun 12 j 09:07 7°**Ⅱ**41'17 direct -1315 Mar 30 j 18:32 10°550'29 behind sun end -1323 Sep 29 j 16:28 12°**Д**00'44 max. Earth dist. -1315 Jul 20 j 02:12 15°\$17'45 19.30369 AU retrograde -1323 Dec 12 j 11:42 opposition 9°**I**58'13 0°10'53 -1323 Dec 13 j 08:09 9°**Д**55'59 17.63273 AU -1315 Jul 21 j 08:45 15°522'32 min. Earth dist. conjunction 0°33'24 -1322 Feb 25 j 17:33 -1315 Jul 21 j 08:45 15°\$22'32 7°Ⅲ53'33 minimum elong 0°33'24 direct -1322 Jun 16 j 04:14 12°**Ц**13'55 19.60455 AU -1315 Nov 06 j 12:08 19°5546'31 max. Earth dist. retrograde -1314 Jan 18 j 18:01 17°543'58 0°38'35 opposition -1322 Jun 17 j 05:21 12°**Д**17'45 0°11'35 -1314 Jan 19 j 19:59 17°5541'08 17.29102 AU min. Earth dist. conjunction -1322 Jun 17 j 05:20 12°**I**17'45 0°11'36 -1314 Apr 04 j 20:51 15°537'16 minimum elong direct -1322 Jun 17 j 00:35 12°**Ⅱ**17'03 -1314 Jul 25 j 07:51 20°505'20 19.27885 AU behind sun begin max. Earth dist. -1322 Jun 17 j 10:06 12°**Ⅲ**18'28 behind sun end retrograde -1322 Oct 04 j 13:35 16°**II**38'47 conjunction -1314 Jul 26 j 13:18 20°509'58 0°35'47 opposition -1322 Dec 17 j 06:51 14°**Д**36'18 0°14'47 minimum elong -1314 Jul 26 j 13:17 20°509'58 min. Earth dist. -1322 Dec 18 j 04:57 14°**Д**33'53 17.57745 AU retrograde -1314 Nov 11 j 13:19 24°534'02 direct -1321 Mar 02 j 14:42 12°**Д**31'21 opposition -1313 Jan 23 j 18:41 22°531'30 0°41'07 max. Earth dist. -1321 Jun 21 j 04:44 16°**Д**52'49 19.55090 AU min. Earth dist. -1313 Jan 24 j 19:37 22°528'46 17.26911 AU direct -1313 Apr 10 j 00:32 20°524'40 -1321 Jun 22 j 07:58 16° **II** 57'00 0°15'04 conjunction -1321 Jun 22 j 07:57 16° **II** 57'00 0°15'06 -1313 Jul 31 j 17:27 24°\$57'48 0°37'56 minimum elong conjunction -1321 Jun 22 i 05:56 16°**Д**56'42 -1313 Jul 31 j 17:27 24°\$57'48 0°37'57 behind sun begin minimum elong -1321 Jun 22 j 09:58 16°**Ц**57'18 -1313 Jul 30 j 12:19 24°\$53'12 19.26005 AU behind sun end max. Earth dist. -1321 Oct 09 i 12:20 21°**Д**18'42 retrograde retrograde -1313 Nov 16 j 13:26 29°521'55 -1321 Dec 22 j 02:44 19°**Д**16'13 0°18'38 opposition opposition -1312 Jan 28 i 19:55 27°\$19'23 0°43'22 min. Earth dist. -1321 Dec 23 j 01:21 19°**Д**13'44 17.52549 AU min. Earth dist. -1312 Jan 29 j 20:59 27°516'38 17.25372 AU direct -1320 Mar 06 j 13:40 17°**Ⅲ**10'59 direct -1312 Apr 14 j 03:14 25°5512'27 max. Earth dist. -1320 Jun 25 j 08:10 21°**Д**33'48 19.50040 AU -1312 Aug 04 j 21:30 29°545'54 0°39'48 conjunction conjunction -1320 Jun 26 j 11:22 21°**Ⅲ**38'00 0°18'28 minimum elong -1312 Aug 04 j 21:30 29°545'54 0°39'49 -1320 Jun 26 j 11:22 21°**Д**38'00 minimum elong 0°18'29 max. Earth dist. -1312 Aug 03 j 17:35 29°541'30 19.24806 AU -1312 Aug 08 j 14:39 retrograde -1320 Oct 13 j 11:05 26° **Ⅲ**00'16 0 $^{\circ}\Omega$ -1320 Dec 25 j 23:31 23°**Д**57'48 0°22'23 opposition retrograde -1312 Nov 20 j 14:42 4°**Ω**10′00 min. Earth dist. -1320 Dec 26 j 23:22 23°**Д**55'11 17.47666 AU -1311 Feb 01 j 21:17 2°Ω07'30 0°45'19 opposition -1319 Mar 11 j 12:56 21° **1**52'19 min. Earth dist. -1311 Feb 02 j 20:37 direct 2°**Ω**04'57 17.24513 AU -1319 Jun 30 j 09:45 26° **I**I 16'02 19.45321 AU -1311 Apr 19 j 08:04 max. Earth dist. direct 0°**Ω**00'34 -1311 Aug 08 j 22:39 4°**Ω**29'59 19.24296 AU max. Earth dist. conjunction -1319 Jul 01 j 15:05 26° **I**I 20'34 0°21'46 minimum elong -1319 Jul 01 j 15:05 26° **I**I 20'34 0°21'48 conjunction -1311 Aug 10 j 01:22 4°Ω34'12 0°41'24 -1319 Sep 08 j 15:10 0 \circ \odot minimum elong -1311 Aug 10 j 01:22 4°**Ω**34'12 0°41'26 retrograde -1319 Oct 18 j 10:49 0°9543'21 retrograde -1311 Nov 25 j 14:27 8°**Ω**58'12 -1319 Nov 28 j 02:09 30°R Ⅱ -1310 Feb 06 j 23:20 6°**Ω**55'48 0°46'57 opposition

min. Earth dist.

-1310 Feb 07 j 22:38

6°Ω53'15 17.24359 AU

-1319 Dec 30 j 21:05 28° **II** 40'52 0°26'00

opposition

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1310 in astronomical counting style is the year 1311 BCE in historical counting style. direct -1310 Apr 24 i 11:39 4°Ω48'54 retrograde -1302 Jan 02 j 15:31 17° mp 10'15 -1310 Aug 14 j 03:07 9°**Ω**18'31 19.24496 AU -1302 Mar 17 j 21:10 15° mp 08'53 0°47'46 max. Earth dist. opposition min. Earth dist. -1302 Mar 18 j 09:15 15° Mp 07'36 17.43968 AU -1310 Aug 15 j 04:47 9°**Ω**22'35 0°42'43 -1302 Jun 02 j 23:46 13° M 03'36 direct conjunction -1310 Aug 15 j 04:47 minimum elong 9°**Ω**22'35 0°42'44 -1310 Nov 30 j 15:36 $13^{\circ}\Omega$ 46'25 -1302 Sep 22 j 13:14 17° m/32'04 0°42'15 retrograde conjunction -1309 Feb 12 j 01:32 11° Ω 44'09 0°48'16 -1302 Sep 22 j 13:14 17° m/32'04 0°42'15 opposition minimum elong -1302 Sep 22 j 00:35 17° Mp 30'04 19.46141 AU min. Earth dist. -1309 Feb 12 j 22:42 11° **Ω**41'51 17.24890 AU max. Earth dist. -1301 Jan 07 j 13:21 21° M 51'57 direct -1309 Apr 29 j 17:30 9°**£**37′22 retrograde max. Earth dist. -1309 Aug 19 j 08:19 14° **Ω**07'11 19.25360 AU opposition -1301 Mar 22 j 23:27 19° m 50'38 0°46'21 min. Earth dist. -1301 Mar 23 j 09:32 19° Mp 49'33 17.48444 AU -1309 Aug 20 j 07:57 14° Ω10'56 0°43'44 -1301 Jun 08 j 02:56 17° m 45'36 conjunction direct -1309 Aug 20 j 07:57 14°**Ω**10'56 minimum elong 0°43'46 -1309 Sep 02 j 06:41 15°**Ω** conjunction -1301 Sep 27 j 10:50 22° m/12'47 0°40'51 retrograde -1309 Dec 05 j 15:14 $18^{\circ}\Omega$ 34'33 minimum elong -1301 Sep 27 j 10:50 22° Mp 12'47 0°40'52 opposition -1308 Feb 17 j 04:11 $16^{\circ}\Omega$ 32'26 $0^{\circ}49'14$ max. Earth dist. -1301 Sep 27 j 01:18 22° m 11'17 19.50824 AU min. Earth dist. -1308 Feb 18 j 01:10 $16^{\circ}\Omega$ 30'10 17.26076 AU retrograde -1300 Jan 12 j 11:04 26° Mp 31'51 -1308 Mar 28 j 01:00 15°R**Ω** opposition -1300 Mar 27 j 01:11 24° m/30'36 0°44'38 direct -1308 May 03 j 21:24 $14^{\circ}\Omega$ 25'49 min. Earth dist. -1300 Mar 27 j 09:12 24° mp 29'45 17.53319 AU -1308 Jun 09 j 01:12 15°Ω direct -1300 Jun 12 j 06:50 22° m 25'51 max. Earth dist. -1308 Aug 23 j 11:35 18° Ω55'29 19.26859 AU conjunction -1300 Oct 01 i 07:18 26° m 51'39 0°39'12 conjunction -1308 Aug 24 i 10:29 $18^{\circ}\Omega$ 59'07 $0^{\circ}44'27$ minimum elong -1300 Oct 01 i 07:18 26° m 51'39 0°39'11 minimum elong -1308 Aug 24 j 10:29 18° Ω 59'07 0°44'28 max. Earth dist. -1300 Sep 30 i 23:15 26° m 50'24 19.55913 AU -1308 Dec 09 j 16:37 23°**Ω**22'26 retrograde -1300 Nov 26 j 01:15 0∘**⊽** -1307 Feb 21 j 06:52 21° Ω 20'28 0°49'51 -1299 Jan 16 i 06:47 1°**£**09'55 opposition retrograde -1307 Feb 22 j 01:42 21° **Ω**18'26 17.27856 AU -1299 Mar 11 j 04:34 30°R Mp min. Earth dist. -1307 May 09 j 03:24 $19^{\circ}\Omega$ 14'02 -1299 Apr 01 j 02:31 29° Mp 08'42 0°42'38 direct opposition -1299 Apr 01 j 08:39 29° Mp 08'04 17.58623 AU min. Earth dist. -1299 Jun 17 j 08:25 27° m 04'15 -1307 Aug 29 j 12:47 23°**Ω**46'55 0°44'52 direct conjunction -1307 Aug 29 j 12:47 23°**Ω**46'55 0°44'52 -1299 Sep 12 j 01:58 0∘**⊽** minimum elong -1307 Aug 28 j 16:19 23°**Ω**43'40 19.28909 AU max. Earth dist. -1307 Dec 14 j 16:07 28°**Ω**09'51 -1299 Oct 06 j 02:51 conjunction 1°**2**28'38 0°37'18 retrograde -1299 Oct 06 j 02:51 -1306 Feb 26 j 09:51 $26^{\circ}\Omega 08'02$ $0^{\circ}50'08$ opposition minimum elong 1°**2**28'38 0°37'18 -1299 Oct 05 j 21:55 -1306 Feb 27 j 04:20 $26^{\circ}\Omega$ 06'03 17.30166 AU min. Earth dist. max. Earth dist. 1°**2**27'52 19.61431 AU -1306 May 14 j 07:10 24°**Ω**01'49 -1298 Jan 21 j 03:24 direct retrograde 5°**Ω**46'02 -1298 Apr 06 j 03:20 opposition 3°**△**44'55 0°40'23 conjunction -1306 Sep 03 j 14:20 28° **Q**34'06 0°44'57 min. Earth dist. -1298 Apr 06 j 06:40 3°**2**44'34 17.64341 AU minimum elong -1306 Sep 03 j 14:20 28° **Q**34'06 0°44'58 direct -1298 Jun 22 j 11:10 1°**≏**40'49 max. Earth dist. -1306 Sep 02 j 18:24 28° Ω30'57 19.31480 AU -1306 Sep 26 j 12:55 0° M conjunction -1298 Oct 10 j 21:26 6°**2**03'42 0°35'11 -1306 Dec 19 j 17:17 2° m 56'35 -1298 Oct 10 j 21:26 6°**2**03'42 0°35'10 retrograde minimum elong -1305 Mar 03 j 12:51 0° m 54'54 0°50'03 max. Earth dist. -1298 Oct 10 j 18:29 6°**2**03'15 19.67367 AU opposition min. Earth dist. -1305 Mar 04 j 05:09 0° m 53'09 17.32976 AU -1297 Jan 25 j 21:51 10° **2**20'16 retrograde -1305 Mar 25 j 13:26 30°R**Ω** -1297 Apr 11 j 03:41 8°**2**19'16 0°37'53 opposition -1305 May 19 j 12:05 $28^{\circ}\Omega 48'54$ direct min. Earth dist. -1297 Apr 11 i 05:13 8°**2**19'06 17.70491 AU -1305 Jul 11 i 08:21 0° m direct -1297 Jun 27 j 10:28 6°**£**15'34 -1305 Sep 08 j 15:14 -1297 Oct 15 j 15:02 10° **△**36'55 0°32'51 conjunction 3° m 20'27 0°44'44 conjunction minimum elong -1305 Sep 08 i 15:14 3° m 20'27 0°44'43 minimum elong -1297 Oct 15 i 15:02 10° \(\Omega\) 36'55 0°32'51 max. Earth dist. -1305 Sep 07 j 22:07 3° Mp 17'44 19.34517 AU max. Earth dist. -1297 Oct 15 j 14:54 10° **2**36'54 19.73716 AU -1305 Dec 24 j 16:51 7° m 42'22 retrograde -1296 Jan 30 j 17:35 14° **2**52'37 retrograde -1304 Mar 07 j 15:54 5° m 40'49 0°49'37 -1296 Apr 15 j 03:17 12° **△**51'47 0°35'11 opposition opposition min. Earth dist. -1304 Mar 08 j 07:23 5° Mp 39'10 17.36226 AU min. Earth dist. -1296 Apr 15 j 01:45 12° **2**51'57 17.77002 AU -1304 May 23 j 15:42 direct 3°m/35'03 direct -1296 Jul 01 j 11:19 10°**-**248'32 conjunction -1304 Sep 12 j 15:23 8° m 05'42 0°44'12 conjunction -1296 Oct 19 j 07:48 15°**♀**08'21 0°30'21 -1304 Sep 12 j 15:23 8° Mp 05'42 0°44'12 minimum elong -1296 Oct 19 j 07:48 15°**♀**08'21 minimum elong 0°30'20 -1304 Sep 11 j 22:50 8° Mp 03'05 19.37988 AU -1296 Oct 19 j 09:49 15°**♀**08'39 19.80390 AU max. Earth dist. max. Earth dist. -1304 Dec 28 j 16:41 12° m 27'00 -1295 Feb 03 j 10:48 19°**£**23'11 retrograde retrograde -1303 Mar 12 j 18:31 10° m 25'33 0°48'51 opposition opposition -1295 Apr 20 j 02:21 17°**£**22'32 0°32'16 min. Earth dist. -1303 Mar 13 j 08:00 10° m 24'07 17.39902 AU min. Earth dist. -1295 Apr 19 j 23:27 17°**2**22'50 17.83822 AU direct -1303 May 28 j 19:38 8° m 20'01 direct -1295 Jul 06 j 08:45 15°**2**19'45 conjunction -1303 Sep 17 j 14:54 12° m 49'39 0°43'22 conjunction -1295 Oct 23 j 23:43 19°**2**38'00 0°27'40 minimum elong -1303 Sep 17 j 14:54 12° **m** 49'39 0°43'22 -1295 Oct 23 j 23:43 19° **2**38'00 0°27'39 minimum elong max. Earth dist. -1303 Sep 17 j 01:15 12° m 47'30 19.41868 AU max. Earth dist. -1295 Oct 24 j 04:03 19°**2**38'40 19.87341 AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1294 in astronomical counting style is the year 1295 BCE in historical counting style. retrograde -1294 Feb 08 i 05:43 23° **2**51'59 behind sun begin -1288 Nov 22 i 09:53 20°ML13'24 -1294 Apr 25 j 00:50 21°**£**51'32 0°29'11 behind sun end -1288 Nov 22 j 22:25 20°M 15'14 opposition min. Earth dist. -1294 Apr 24 j 18:50 21° **2**52'09 17.90863 AU -1288 Nov 23 j 09:12 20°M 16'52 20.36940 AU max. Earth dist. -1287 Mar 10 j 17:22 24° M22'20 -1294 Jul 11 j 07:27 19°**£**49'14 direct retrograde -1287 May 26 j 18:47 22°**11**22'45 opposition 0°04'31 -1294 Oct 28 j 14:40 24° **2**05'53 0°24'50 conjunction min. Earth dist. -1287 May 26 j 01:59 22°M24'27 18.40261 AU -1294 Oct 28 j 14:40 24° **2**05'53 0°24'49 minimum elong direct -1287 Aug 11 j 15:28 20°M23'19 -1294 Oct 28 j 21:20 24°**♀**06'54 19.94463 AU max. Earth dist. retrograde -1293 Feb 12 j 22:00 28°**♀**19'02 conjunction -1287 Nov 27 j 01:35 24°M28'49 0°02'29 -1287 Nov 27 j 01:33 24°M28'49 opposition -1293 Apr 29 j 22:53 26°**2**18'46 0°25'57 minimum elong 0°02'28 min. Earth dist. -1293 Apr 29 j 15:51 26° **2**19'29 17.98054 AU behind sun begin -1287 Nov 26 j 19:02 24°M27'52 -1293 Jul 16 j 03:15 24°**2**16'56 -1287 Nov 27 j 08:04 24°M29'46 direct behind sun end -1287 Nov 27 j 19:26 24°M31'29 max. Earth dist. 20.43569 AU conjunction -1293 Nov 02 j 04:55 28°**2**31'59 0°21'52 retrograde -1286 Mar 15 j 07:29 28°M36'01 minimum elong -1293 Nov 02 j 04:55 28°**೨**31'59 0°21'51 opposition -1286 May 31 j 11:15 26°M36'28 0°00'50 max. Earth dist. -1293 Nov 02 j 13:20 28° **△**33'16 20.01697 AU min. Earth dist. -1286 May 30 j 16:00 26° ML38'24 18.46827 AU -1293 Nov 26 j 13:47 0°M direct -1286 Aug 16 j 07:48 24°M37'20 retrograde -1292 Feb 17 j 15:58 2°M44'16 desc. node -1286 Aug 23 j 12:09 24°M38'39 opposition -1292 May 03 j 19:53 0°M44'12 0°22'34 min. Earth dist. -1292 May 03 j 10:00 0°M45'13 18.05304 AU conjunction -1286 Dec 01 j 10:15 28°M41'21 -1292 May 22 j 04:23 30°R ₽ minimum elong -1286 Dec 01 j 10:15 28°M41'21 0°00'57 direct -1292 Jul 19 i 23:55 28°**-**42'50 behind sun begin -1286 Dec 01 i 03:43 28° ML40'24 -1292 Sep 13 j 15:53 0°M behind sun end -1286 Dec 01 i 16:46 28°ML42'17 max. Earth dist. -1286 Dec 02 i 06:37 28°M 44'23 20.50061 AU conjunction -1292 Nov 05 j 18:24 2°M56'17 0°18'47 -1286 Dec 23 i 18:14 0°**∡**¹ -1292 Nov 05 i 18:25 2°M56'17 0°18'46 -1285 Mar 19 j 18:03 2°**х** 47'46 minimum elong retrograde max. Earth dist. -1292 Nov 06 j 04:58 2°ML57'53 20.08941 AU -1285 Jun 04 j 07:05 0° ₹ 50'15 18.53266 AU min. Earth dist. -1291 Feb 21 j 07:01 7°ML07'42 -1285 Jun 05 j 02:59 0°**∡**148'15 0°-2'-48 retrograde opposition -1291 May 08 j 16:31 5°ML07'48 0°19'05 -1285 Jun 25 j 15:41 30°RM opposition 5°M08'52 18.12537 AU -1291 May 08 j 05:57 -1285 Aug 20 j 21:21 28°M49'26 min. Earth dist. direct -1291 Jul 24 j 18:09 -1285 Oct 13 j 05:53 direct 3°M06'53 0°**∡**7 -1291 Nov 10 j 06:58 -1285 Dec 05 j 18:18 conjunction 7°M18'42 0°15'37 conjunction 2°**₹**′52'01 0°-4'-13 7°M18'42 0°15'36 -1285 Dec 05 j 18:18 -1291 Nov 10 j 06:58 minimum elong minimum elong 2°×752'01 0°04'16 -1291 Nov 10 j 05:02 -1285 Dec 05 j 11:52 behind sun begin 7°ML18'25 behind sun begin 2°**х** 51′05 -1291 Nov 10 j 08:54 -1285 Dec 06 j 00:44 behind sun end 7°**ጤ**19'00 behind sun end 2°**₹**52'56 -1285 Dec 06 j 15:19 max. Earth dist. -1291 Nov 10 j 18:46 7°M20'30 20.16142 AU max. Earth dist. 2°**尽**55'08 20.56440 AU retrograde -1290 Feb 26 j 00:18 11°ML29'17 retrograde -1284 Mar 23 j 06:28 6°**х¹**57'42 -1290 May 13 j 12:17 9°M29'30 0°15'31 opposition -1284 Jun 08 j 17:36 4°**₹**58'14 0°-6'-25 opposition min. Earth dist. -1290 May 12 j 22:59 9°M30'52 18.19687 AU min. Earth dist. -1284 Jun 07 j 19:32 5°**₰**00'27 18.59587 AU direct -1290 Jul 29 j 13:21 7°M29'00 direct -1284 Aug 24 j 11:13 2°×759'43 -1290 Nov 14 j 18:53 11°M39'14 0°12'23 -1284 Dec 09 j 01:52 7°**∡**¹00'59 0°-7'-26 conjunction conjunction -1290 Nov 14 j 18:54 11°M39'14 0°12'22 -1284 Dec 09 j 01:52 7°**∡**¹00'59 0°07'28 minimum elong minimum elong -1290 Nov 14 j 14:29 11°M38'35 -1284 Dec 08 j 19:53 7°**∡**¹00'08 behind sun begin behind sun begin -1290 Nov 14 j 23:18 11°M 39'53 -1284 Dec 09 i 07:50 behind sun end behind sun end 7°**∡**'01'51 max. Earth dist. -1290 Nov 15 i 08:50 11°M41'20 20.23225 AU max. Earth dist. -1284 Dec 10 i 01:12 7°**х** 04′26 20.62680 AU -1289 Jan 17 i 17:48 15° ML retrograde -1283 Mar 27 i 16:20 11° ₹ 05'59 -1289 Mar 02 j 13:40 15° ML48'57 retrograde min. Earth dist. -1283 Jun 12 i 09:05 9°**∡**108'53 18.65752 AU -1289 Apr 17 j 07:39 15°RML -1283 Jun 13 j 07:45 9°**х** 06′36 0°-9'-58 opposition -1289 May 18 i 07:22 13°ML49'16 0°11'52 direct -1283 Aug 28 j 23:04 7°**х** 08′26 opposition min. Earth dist. -1289 May 17 j 17:33 13°ML50'40 18.26706 AU direct -1289 Aug 03 j 06:16 11°ML49'10 -1283 Dec 13 j 08:39 11° ₹ 08'24 0°-10'-36 conjunction -1289 Nov 03 j 04:16 15°M minimum elong -1283 Dec 13 j 08:39 11°**尽** 08'24 0°10'38 behind sun begin -1283 Dec 13 j 03:32 11° ₹ 07'40 conjunction -1289 Nov 19 j 05:54 15°M 57'47 0°09'06 behind sun end -1283 Dec 13 j 13:45 11° ₹ 09'08 -1289 Nov 19 j 05:54 15°M 57'47 0°09'06 max. Earth dist. -1283 Dec 14 j 08:25 11° ₹ 11'54 20.68761 AU minimum elong -1289 Nov 19 j 00:18 15° ML 56'57 -1282 Apr 01 j 03:36 15° ₹ 12'48 behind sun begin retrograde -1289 Nov 19 j 11:29 15°M 58'36 -1282 Jun 17 j 21:08 13° **₹** 13'30 behind sun end opposition 0°-13'-26 -1282 Jun 16 j 20:38 13° ₹ 15'57 18.71739 AU max. Earth dist. -1289 Nov 19 j 20:42 16° M 00'01 20.30171 AU min. Earth dist. direct -1282 Sep 02 j 10:34 11° ₹ 15'39 retrograde -1288 Mar 06 j 05:42 20° ML06'39 min. Earth dist. -1288 May 21 j 09:09 18° M 08'41 18.33567 AU opposition -1288 May 22 j 01:26 18°ML07'02 0°08'12 conjunction -1282 Dec 17 j 15:14 15° ₹ 14'27 0°-13'-42 direct -1288 Aug 07 j 00:08 16°ML07'15 minimum elong -1282 Dec 17 j 15:14 15° ₹ 14'27 0°13'43 behind sun begin -1282 Dec 17 j 11:36 15° ₹ 13'56 -1288 Nov 22 j 16:09 20°ML14'19 0°05'48 behind sun end -1282 Dec 17 j 18:52 15° ₹ 14'58 conjunction -1288 Nov 22 j 16:09 20°ML14'19 0°05'46 max. Earth dist. -1282 Dec 18 j 17:05 15° ₹ 18'15 20.74623 AU minimum elong

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1281 in astronomical counting style is the year 1282 BCE in historical counting style. -1281 Apr 05 i 13:07 19° ₹ 18'15 retrograde -1273 May 08 j 10:51 21°る26'53 retrograde opposition min. Earth dist. -1281 Jun 21 j 08:56 17° ₹21'33 18.77474 AU -1273 Jul 25 j 18:09 19°る27'54 0°-39'-13 min. Earth dist. -1281 Jun 22 j 09:45 17° ₹ 19'04 0°-16'-50 -1273 Jul 24 j 16:23 19°る30'28 19.07891 AU opposition direct -1281 Sep 06 j 20:51 15° ₹21'33 -1273 Oct 09 j 11:12 17°₹31'48 direct conjunction -1281 Dec 21 j 21:20 19° ₹ 19'15 0°-16'-43 -1272 Jan 22 j 14:44 21°중23'38 0°-36'-26 conjunction -1272 Jan 22 j 14:44 21°₹23'38 0°36'27 -1281 Dec 21 j 21:20 19° 🗷 19'15 0°16'45 minimum elong minimum elong -1281 Dec 22 j 23:05 19° ₹23'01 20.80216 AU -1272 Jan 23 j 17:28 21°중27'27 21.08700 AU max. Earth dist. max. Earth dist. -1280 Apr 08 j 23:27 23°**尽** 22'33 -1272 May 11 j 19:00 25°₹24'30 retrograde retrograde -1272 Jul 28 j 00:19 23°중27'59 19.09495 AU opposition -1280 Jun 25 j 21:45 21°**尽**23'27 0°-20'-7 min. Earth dist. -1272 Jul 29 j 01:50 23°**궁**25'26 0°-41'-15 min. Earth dist. -1280 Jun 24 j 19:43 21°**х** 26'03 18.82912 AU opposition -1280 Sep 10 j 06:27 19° ₹26'14 -1272 Oct 12 j 15:39 21°₹29'21 direct direct -1280 Dec 25 j 03:08 23° ₹22'56 0°-19'-38 conjunction conjunction -1271 Jan 25 j 19:19 25°**♂**20'51 0°-38'-10 -1271 Jan 25 j 19:19 25°**♂**20'51 minimum elong -1280 Dec 25 j 03:08 23°**₹**22'56 0°19'40 minimum elong 0°38'13 max. Earth dist. -1280 Dec 26 j 06:34 23°₹26'56 20.85461 AU max. Earth dist. -1271 Jan 26 j 23:01 25°중24'48 21.10087 AU retrograde -1279 Apr 13 j 08:26 27°**尽** 25'46 retrograde -1271 May 16 j 01:47 29°**♂**21'38 min. Earth dist. -1279 Jun 29 j 07:07 25° ₹ 29'23 18.87966 AU min. Earth dist. -1271 Aug 01 j 07:49 27°る25'03 19.10682 AU opposition -1279 Jun 30 j 09:12 25°**尽** 26'47 0°-23'-18 opposition -1271 Aug 02 j 09:08 27°る22'30 0°-43'-4 direct -1279 Sep 14 j 15:39 23° ₹29'51 direct -1271 Oct 16 j 21:39 25°る26'27 conjunction -1279 Dec 29 i 08:42 27° ₹25'37 0°-22'-27 conjunction -1270 Jan 29 i 23:59 29°**♂**17'41 0°-39'-44 minimum elong -1279 Dec 29 i 08:42 27° ₹25'37 0°22'30 minimum elong -1270 Jan 29 j 23:59 29°る17'41 0°39'46 max. Earth dist. -1279 Dec 30 j 11:35 27° ₹29'31 20.90312 AU max. Earth dist. -1270 Jan 31 j 02:22 29°る21'27 21.11087 AU -1278 Feb 15 j 07:19 0°₹ -1270 Feb 11 i 09:46 0°≈ -1278 Apr 17 j 18:25 1°る28'02 retrograde -1270 May 20 j 10:02 3°≈18'29 retrograde -1278 Jun 21 j 18:50 30°R ✓ opposition -1270 Aug 06 j 16:04 1°≈19'18 0°-44'-41 -1278 Jul 04 j 20:06 29° ₹ 29'07 0°-26'-21 min. Earth dist. -1270 Aug 05 j 15:11 1°≈21'47 19.11496 AU opposition -1278 Jul 03 j 17:22 29° ₹31'47 18.92601 AU -1270 Sep 11 j 22:04 30°R ₹ min. Earth dist. -1270 Oct 21 j 01:18 29° ₹23'14 -1278 Sep 18 j 23:57 27° ₹32'26 direct direct -1270 Nov 28 j 04:20 -1278 Dec 07 j 21:59 0°る -1277 Jan 02 j 14:10 1°る27'22 0°-25'-9 -1269 Feb 03 j 04:55 3°≈14'21 0°-41'-6 conjunction conjunction -1277 Jan 02 j 14:10 -1269 Feb 03 j 04:55 1°る27'22 0°25'12 minimum elong minimum elong 3°≈14'21 0°41'08 -1277 Jan 03 j 18:17 -1269 Feb 04 j 07:58 1°る31'26 20.94691 AU max. Earth dist. 3°≈18'12 21.11699 AU max. Earth dist. -1277 Apr 22 j 02:39 5°**る**29'25 -1269 May 24 j 17:08 retrograde retrograde 7°≈15'12 -1277 Jul 08 j 03:59 3°る33'12 18.96724 AU -1269 Aug 10 j 22:42 min. Earth dist. opposition 5°≈15'58 0°-46'-5 opposition -1277 Jul 09 j 06:26 3°**ප**30'34 0°-29'-15 min. Earth dist. -1269 Aug 09 j 22:12 5°≈18'25 19.11904 AU direct -1277 Sep 23 j 08:06 1°る34'06 direct -1269 Oct 25 j 06:20 3°≈19'56 -1268 Feb 07 j 09:53 conjunction -1276 Jan 06 j 19:24 5°**ප්**28'14 0°-27'-43 conjunction 7°≈10'59 0°-42'-17 -1276 Jan 06 j 19:24 5°る28'14 0°27'45 minimum elong -1268 Feb 07 j 09:53 7°≈10'59 0°42'19 minimum elong max. Earth dist. -1276 Jan 07 j 22:27 5°る32'09 20.98549 AU max. Earth dist. -1268 Feb 08 j 11:20 7°≈14'36 21.11914 AU retrograde -1276 Apr 25 j 12:11 9°**る**29'58 retrograde -1268 May 28 j 01:45 11°≈11'58 -1276 Jul 12 j 16:07 7°る31'07 0°-32'-1 min. Earth dist. -1268 Aug 13 j 05:24 9°≈15'05 19.11919 AU opposition -1276 Jul 11 j 13:33 min. Earth dist. 7°る33'46 19.00314 AU opposition -1268 Aug 14 j 05:07 9°≈12'42 0°-47'-16 -1276 Sep 26 j 15:23 direct 5°₹34'48 direct -1268 Oct 28 i 10:12 7°≈16'39 -1275 Jan 10 j 00:34 9°**ට**28'16 0°-30'-9 -1267 Feb 10 i 15:18 11°≈07'47 0°-43'-16 conjunction conjunction minimum elong -1275 Jan 10 i 00:34 9°**ප**28'16 0°30'11 minimum elong -1267 Feb 10 i 15:18 11°≈07'47 0°43'17 max. Earth dist. -1275 Jan 11 j 04:34 9°る32'18 21.01855 AU max. Earth dist. -1267 Feb 11 j 17:10 11°≈11'27 21.11717 AU retrograde -1275 Apr 29 j 19:21 13°る29'42 -1267 May 13 i 03:25 15°≈ -1275 Jul 15 j 23:10 11°る33'27 19.03344 AU retrograde -1267 Jun 01 j 09:19 15°≈08'56 min. Earth dist. opposition -1275 Jul 17 j 01:23 11°♂30'51 0°-34'-36 -1267 Jun 20 j 20:27 15°R≈ direct -1275 Sep 30 j 22:38 9°**る**34'38 opposition -1267 Aug 18 j 11:24 13°≈09'39 0°-48'-15 -1267 Aug 17 j 12:17 13°≈11'58 19.11501 AU min. Earth dist. conjunction -1274 Jan 14 j 05:17 13°₹27'28 0°-32'-25 direct -1267 Nov 01 j 14:13 11°≈13'36 -1274 Jan 14 j 05:17 13°₹27'28 0°32'26 -1266 Feb 13 j 10:39 15°≈ minimum elong -1274 Jan 15 j 08:13 13°₹31'20 21.04627 AU max. Earth dist. -1274 May 04 j 04:13 17°る28'40 -1266 Feb 14 j 20:52 15°≈04'52 0°-44'-2 retrograde conjunction -1274 Jul 20 j 08:02 15°중32'21 19.05864 AU -1266 Feb 14 j 20:52 15°≈04'52 0°44'05 min. Earth dist. minimum elong opposition -1274 Jul 21 j 10:08 15°₹29'45 0°-37'00 max. Earth dist. -1266 Feb 15 j 20:49 15°≈08'16 21.11085 AU direct -1274 Oct 05 j 04:43 13°₹33'36 retrograde -1266 Jun 05 j 18:22 19°≈06'17 opposition -1266 Aug 22 j 17:40 17°≈06'57 0°-48'-59 -1273 Jan 18 j 10:08 17°₹25'53 0°-34'-30 conjunction min. Earth dist. -1266 Aug 21 j 19:48 17°≈09'09 19.10634 AU minimum elong -1273 Jan 18 j 10:08 17°₹25'53 0°34'33 -1266 Nov 05 j 18:29 15°≈10'51 direct

max. Earth dist.

-1273 Jan 19 j 14:02 17°る29'53 21.06891 AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1265 in astronomical counting style is the year 1266 BCE in historical counting style. -1265 Feb 19 i 03:10 19°≈02'24 0°-44'-36 conjunction -1257 Mar 23 j 22:31 21°\(\pi\)05'14 0°-41'-19 conjunction minimum elong minimum elong -1265 Feb 19 i 03:10 19°≈02'24 -1257 Mar 23 j 22:31 21° \(\) 05'14 0°41'20 0°44'37 max. Earth dist. -1265 Feb 20 j 03:04 19°≈05'47 21.09965 AU max. Earth dist. -1257 Mar 24 j 09:32 21° + 06'49 20.82557 AU -1265 Jun 10 j 02:31 23°≈04'06 -1257 Jul 13 j 05:28 25° **₭** 10'47 retrograde retrograde 0°-49'-30 -1265 Aug 26 j 23:37 21°≈04'43 -1257 Sep 28 j 02:11 23° **升** 10'13 0°-44'-57 opposition opposition -1265 Aug 26 j 02:48 21°≈06'49 -1257 Sep 27 j 17:20 23°**米**11'08 18.80021 AU min. Earth dist. 19.09249 AU min. Earth dist. -1265 Nov 09 j 22:37 19°≈08'34 -1257 Dec 11 j 17:01 21°\ 12'10 direct direct -1264 Feb 23 j 09:45 23°≈00'26 0°-44'-58 -1256 Mar 27 j 09:30 25° **米** 09'41 0°-39'-56 conjunction conjunction -1264 Feb 23 j 09:45 23°≈00'26 -1256 Mar 27 j 09:30 25°**米**09'41 0°39'57 minimum elong 0°45'00 minimum elong -1256 Mar 27 j 17:39 25° **米** 10'51 20.77412 AU max. Earth dist. -1264 Feb 24 j 07:11 23°≈03'29 21.08321 AU max. Earth dist. -1264 Jun 13 j 11:27 27°≈02'29 -1256 Jul 16 j 16:33 29° **∺** 15'57 retrograde retrograde -1264 Aug 29 j 10:41 25°≈04'58 19.07331 AU -1256 Oct 01 j 09:23 27° ¥ 15'13 0°-43'-19 min. Earth dist. opposition opposition -1264 Aug 30 j 05:49 25°≈03'02 0°-49'-47 min. Earth dist. -1256 Oct 01 j 02:34 27°**)** 15'56 18.74759 AU direct -1264 Nov 13 j 02:54 23°≈06'46 direct -1256 Dec 14 j 22:59 25° ¥ 16'52 conjunction -1263 Feb 26 j 16:51 26°≈59'03 0°-45'-6 conjunction -1255 Mar 31 j 21:18 29° **★** 15'31 0°-38'-21 minimum elong -1263 Feb 26 j 16:51 26°≈59'03 0°45'07 minimum elong -1255 Mar 31 j 21:19 29° **₭** 15'31 0°38'21 max. Earth dist. -1263 Feb 27 j 13:53 27°≈02'03 21.06115 AU max. Earth dist. -1255 Apr 01 j 04:55 29°¥16'36 20.72038 AU -1263 Apr 27 j 10:45 0°**)**€ -1255 Apr 13 j 19:59 $0^{\circ}\Upsilon$ retrograde -1263 Jun 17 j 20:23 1°**)**(01'29 retrograde -1255 Jul 21 j 03:53 3°Y22'31 -1263 Aug 09 i 13:19 30°R≈ opposition -1255 Oct 05 i 16:51 1°**Υ**21'41 0°-41'-28 opposition -1263 Sep 03 i 12:00 29°≈01'55 0°-49'-49 min. Earth dist. -1255 Oct 05 i 10:56 1°**Υ**22'18 18.69265 AU min. Earth dist. -1263 Sep 02 j 18:02 29°≈03'45 19.04831 AU -1255 Nov 10 j 17:58 30°R**)**€ direct -1263 Nov 17 j 08:09 27°≈05'29 direct -1255 Dec 19 i 06:24 29°\ 23'04 -1262 Feb 13 j 19:13 0°**∀** -1254 Jan 26 j 04:27 -1262 Mar 03 j 00:26 0°**¥**58'16 0°-45'-1 conjunction -1254 Apr 05 j 09:57 3°Y'22'54 0°-36'-33 conjunction -1262 Mar 03 j 00:26 0°****58'16 0°45'02 -1254 Apr 05 j 09:57 3°Y22'54 0°36'34 minimum elong minimum elong -1262 Mar 03 j 18:41 -1254 Apr 05 j 14:32 3°**Υ**23'33 20.66447 AU max. Earth dist. 1°**¥**00'51 21.03345 AU max. Earth dist. -1262 Jun 22 j 05:02 -1254 Jul 25 j 15:55 5°**)**(01'06 7°**Y**30'42 retrograde retrograde -1254 Oct 10 j 00:46 5°**Υ**29'47 0°-39'-22 -1262 Sep 07 j 18:09 3°**)**€01'24 0°-49'-36 opposition opposition 5°**Υ**30'09 18.63568 AU -1262 Sep 07 j 02:11 3°**¥**03'01 19.01783 AU -1254 Oct 09 j 21:13 min. Earth dist. min. Earth dist. -1262 Nov 21 j 12:20 1°**)** 04'44 -1254 Dec 23 j 13:42 3°Y30'52 direct direct -1261 Mar 07 j 08:42 4°**)** 58'05 0°-44'-43 -1253 Apr 09 j 23:40 7°Υ'32'00 0°-34'-34 conjunction conjunction -1261 Mar 07 j 08:42 4°**¥**58'05 0°44'45 -1253 Apr 09 j 23:40 7°**Υ**32'00 0°34'34 minimum elong minimum elong -1261 Mar 08 j 02:20 max. Earth dist. 5°**₭**00'36 21.00031 AU max. Earth dist. -1253 Apr 10 j 03:25 7°**Υ**32'32 20.60642 AU retrograde -1261 Jun 26 j 14:34 9°**₭**01'22 retrograde -1253 Jul 30 j 04:39 11°**Υ**40'37 min. Earth dist. -1261 Sep 11 j 09:33 7°**₭**03'00 18.98208 AU opposition -1253 Oct 14 j 09:09 9°**Y**39'38 0°-37'-4 opposition -1261 Sep 12 j 00:20 7°**)**€01'30 0°-49'-9 min. Earth dist. -1253 Oct 14 j 06:40 9°**Υ**39'54 18.57640 AU direct -1261 Nov 25 j 18:23 5°**)**€04'36 direct -1253 Dec 27 j 22:23 7°**Υ**40'27 -1260 Mar 10 j 17:08 8°**)** 58'35 0°-44'-12 -1252 Apr 13 j 13:57 11°**Υ**42'55 0°-32'-22 conjunction conjunction -1260 Mar 10 j 17:08 8°****58'35 0°44'13 -1252 Apr 13 j 13:57 11°**Υ**42'55 0°32'24 minimum elong minimum elong -1260 Mar 11 i 07:59 9°**¥**00'42 20.96231 AU -1252 Apr 13 j 14:30 11°**Υ**'42'59 20.54602 AU max. Earth dist. max. Earth dist. -1260 Jun 29 j 23:14 13° **)** 02'22 -1252 Aug 02 j 17:28 15° Υ 52'25 retrograde retrograde -1260 Sep 15 i 06:38 11°**)** €02'18 0°-48'-28 -1252 Oct 17 j 18:14 13°**Υ**'51'20 0°-34'-33 opposition opposition -1252 Oct 17 j 18:25 13°**Υ**51'19 18.51481 AU min. Earth dist. -1260 Sep 14 i 17:50 11°\(\psi\)03'37 18.94190 AU min. Earth dist. direct -1260 Nov 28 j 22:47 9°**₩**05'07 direct -1252 Dec 31 j 07:04 11° Υ 51'51 -1259 Mar 15 j 02:21 12°¥59'51 0°-43'-27 conjunction -1251 Apr 18 i 05:32 15° **Y** 55'44 0° -30'00 conjunction -1259 Mar 15 j 02:21 12° **\(\)** 59'51 0°43'29 minimum elong -1251 Apr 18 j 05:32 15° Υ 55'44 0° 30'00 minimum elong -1259 Mar 15 j 16:43 13°**)** €01'54 20.92013 AU -1251 Apr 18 j 04:54 15° Υ 55'38 20.48315 AU max. Earth dist. max. Earth dist. -1259 Jul 04 j 09:14 17°**米** 04'10 -1251 Aug 07 j 07:52 20°**Υ**06'06 retrograde retrograde -1251 Oct 22 j 03:42 18° Υ 04'55 0°-31'-49 opposition -1259 Sep 19 j 12:56 15° **★** 03'55 0°-47'-32 opposition -1251 Oct 22 j 05:08 18°**Υ**04'46 18.45055 AU min. Earth dist. -1259 Sep 19 j 01:09 15°**米**05'08 18.89780 AU min. Earth dist. direct -1259 Dec 03 j 05:14 13° **★**06'27 direct -1250 Jan 04 j 17:38 16°**Y**05'06 -1258 Mar 19 j 12:00 17° **★**02'01 0°-42'-30 -1250 Apr 22 j 21:56 20°**Υ**10'26 0°-27'-26 conjunction conjunction -1258 Mar 19 j 12:00 17° **€** 02'01 -1250 Apr 22 j 21:56 20°**Υ**10'26 minimum elong 0°42'30 minimum elong 0°27'26 max. Earth dist. -1258 Mar 19 j 23:34 17° **★**03'40 20.87441 AU max. Earth dist. -1250 Apr 22 j 17:46 20° \(\gamma \) 09'49 20.41755 AUretrograde -1258 Jul 08 j 19:01 21° **★**06'56 retrograde -1250 Aug 11 j 21:39 24°**Υ**21'40 opposition -1258 Sep 23 j 19:33 19°**米**06'30 0°-46'-22 opposition -1250 Oct 26 j 14:00 22° **Y**20'23 0°-28'-53 min. Earth dist. -1258 Sep 23 j 09:47 19°**米**07'31 18.85049 AU min. Earth dist. -1250 Oct 26 j 18:21 22° \begin{pmatrix} \gamma \gmma \gamma \gamm direct -1258 Dec 07 j 10:19 17°\ 08'44 direct -1249 Jan 09 j 03:40 20° \begin{pmatrix} 20'09 \end{pmatrix}

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1249 in astronomical counting style is the year 1250 BCE in historical counting style. -1249 Apr 27 i 15:20 24° \(\gamma^2 26'59 \) 0° -24'-42 min. Earth dist. -1243 Nov 25 j 22:15 22°\(256'55\) 17.88675 AU conjunction -1242 Feb 08 j 06:18 20°**8**55'15 -1249 Apr 27 j 15:20 24°**Υ**26'59 direct minimum elong 0°24'42 max. Earth dist. -1249 Apr 27 j 09:41 24° Υ 26'09 20.34937 AU -1242 May 29 j 15:50 25°**8**13'04 0°-2'-4 -1249 Aug 16 j 13:32 28°**Y**39'04 retrograde conjunction -1249 Oct 31 j 00:42 26° \(\gamma^3 \) 7'38 0° -25'-47 -1242 May 29 j 15:50 25°**8**13'04 0°02'04 opposition minimum elong -1249 Oct 31 j 06:12 26° Υ37'03 18.31423 AU -1242 May 29 j 09:02 25°**8**12'04 min. Earth dist. behind sun begin -1248 Jan 13 j 16:16 24°**Y**37'01 -1242 May 29 j 22:38 25°**8**14'03 direct behind sun end max. Earth dist. -1242 May 28 j 19:52 25°**8**10'04 19.85326 AU -1248 May 01 j 09:26 28°**Y**45'20 0°-21'-48 -1242 Sep 16 j 15:51 29°**8**31'00 conjunction retrograde minimum elong -1248 May 01 j 09:26 28°**Y**45'20 0°21'48 opposition -1242 Nov 29 j 22:44 27°**8**28'34 0°00'-16 28°**Υ**44'01 20.27899 AU max. Earth dist. -1248 May 01 j 00:28 min. Earth dist. -1242 Nov 30 j 16:12 27°**8**26'40 17.82042 AU -1248 May 22 j 19:50 -1242 Dec 27 j 05:44 26°821'23 0°8 asc. node -1248 Aug 20 j 04:18 2°858'17 -1241 Feb 12 j 22:11 25°**8**24'52 retrograde direct opposition -1248 Nov 03 j 12:10 0°**8**56'41 0°-22'-30 min. Earth dist. -1248 Nov 03 j 20:30 0°**8**55'48 18.24310 AU conjunction -1241 Jun 03 j 15:35 29°**8**44'17 0°01'34 -1248 Nov 26 j 13:54 30°RY minimum elong -1241 Jun 03 j 15:35 29°**8**44'17 0°01'35 direct -1247 Jan 17 j 03:38 28°Y55'36 behind sun begin -1241 Jun 03 j 08:48 29°**8**43'17 -1247 Mar 08 j 13:50 0° 8 behind sun end -1241 Jun 03 j 22:23 29°845'17 max. Earth dist. -1241 Jun 02 j 18:08 29°841'02 19.78836 AU conjunction -1247 May 06 j 04:27 3°**8**05'28 0°-18'-46 -1241 Jun 07 j 23:22 $0^{\circ}\Pi$ minimum elong -1247 May 06 j 04:27 3°805'28 0°18'47 retrograde -1241 Sep 21 j 13:05 4°**Ⅲ**03'02 max. Earth dist. -1247 May 05 i 18:05 3°803'56 20.20727 AU opposition -1241 Dec 04 i 15:08 2°**I**100'34 0°03'39 retrograde -1247 Aug 24 j 21:33 7°**8**19'15 min. Earth dist. -1241 Dec 05 i 08:47 1°**Д**58'39 17.75700 AU opposition -1247 Nov 08 i 00:07 5°817'29 0°-19'-4 -1240 Feb 06 i 08:30 30°R8 min. Earth dist. -1247 Nov 08 j 09:22 5°816'30 18.17083 AU direct -1240 Feb 17 i 17:34 29°856'32 -1246 Jan 21 j 17:41 3°815'57 -1240 Feb 29 j 02:05 $\mathbb{I}^{\circ 0}$ direct max. Earth dist. -1246 May 10 j 11:03 7°**と**25'24 20.13472 AU -1240 Jun 07 j 16:15 4°**Ⅱ**17'34 0°05'08 conjunction -1246 May 11 j 00:21 7°**8**27'21 0°-15'-36 -1240 Jun 07 j 16:16 4°**Ⅱ**17'34 0°05'08 conjunction minimum elong -1240 Jun 07 j 09:41 -1246 May 11 j 00:21 7°**8**27'21 0°15'36 4°**Ⅱ**16'35 minimum elong behind sun begin -1246 May 10 j 23:28 -1240 Jun 07 j 22:51 behind sun begin 7°**8**27'14 4°**Ⅱ**18'32 behind sun end -1246 May 11 j 01:13 max. Earth dist. -1240 Jun 06 j 17:45 4°**I**14'09 19.72635 AU behind sun end 7°**8**27'29 8°**Ⅱ**37′06 -1246 Aug 29 j 13:45 11°**8**41'59 -1240 Sep 25 j 09:06 retrograde retrograde -1240 Dec 08 j 08:28 6°**Д**34'38 0°07'36 -1246 Nov 12 j 12:47 9°**8**40'03 0°-15'-29 opposition opposition -1246 Nov 13 j 00:45 9°**8**38'46 18.09830 AU -1240 Dec 09 j 04:11 6°**I**32'29 17.69657 AU min. Earth dist. min. Earth dist. -1239 Feb 21 j 11:03 -1245 Jan 26 j 06:45 7°**8**38'02 4°**Ⅱ**30'18 direct direct conjunction -1245 May 15 j 21:05 11°**8**51'01 0°-12'-20 conjunction -1239 Jun 12 j 17:38 8°II52'55 0°08'40 minimum elong -1245 May 15 j 21:05 11°**8**51'01 0°12'21 minimum elong -1239 Jun 12 j 17:38 8°**Ⅲ**52'55 0°08'41 behind sun begin -1245 May 15 j 16:44 11°**8**50'24 behind sun begin -1239 Jun 12 j 11:47 8°**Ⅲ**52′03 behind sun end -1245 May 16 j 01:26 11°**8**51'39 behind sun end -1239 Jun 12 j 23:29 8°**Ⅲ**53'47 max. Earth dist. -1245 May 15 j 06:25 11°848'51 20.06237 AU max. Earth dist. -1239 Jun 11 j 17:15 8°**Д**49'12 19.66744 AU -1245 Jul 13 j 23:56 15°**8** retrograde -1239 Sep 30 j 07:35 13°**Д**13'13 -1245 Sep 03 j 08:08 16°806'29 -1239 Dec 13 j 02:36 11°**Ⅱ**10'45 0°11'32 retrograde opposition -1245 Oct 25 j 16:51 15°R8 min. Earth dist. -1239 Dec 13 j 22:43 11°**Д**08'34 17.63908 AU -1245 Nov 17 i 02:05 14°804'23 0°-11'-48 -1238 Feb 26 і 08:34 9°**Д**06'09 opposition direct -1245 Nov 17 j 14:37 14°\(\mathbf{0}3'\)02 18.02628 AU min. Earth dist. -1244 Jan 30 j 22:19 12°**8**01'55 -1238 Jun 17 j 19:53 13°**Д**30'17 0°12'10 direct conjunction -1244 Apr 28 i 03:05 15°8 -1238 Jun 17 j 19:53 13°**Ⅲ**30'17 minimum elong 0°12'12 -1238 Jun 17 i 15:27 13°**Ⅲ**29'37 behind sun begin -1244 May 19 i 18:22 16°**8**16'29 0°-8'-59 behind sun end -1238 Jun 18 j 00:20 13°**耳**30'57 conjunction -1244 May 19 j 18:22 16°**8**16'29 0°08'59 max. Earth dist. -1238 Jun 16 j 18:51 13°**Д**26'27 19.61117 AU minimum elong -1244 May 19 j 12:37 16°**8**15'39 retrograde -1238 Oct 05 j 04:41 17°**Д**51'16 behind sun begin -1238 Dec 17 j 21:43 15° **II**48'51 0°15'26 behind sun end -1244 May 20 j 00:08 16°**8**17'20 opposition max. Earth dist. -1244 May 19 j 01:30 16°8 13'59 19.99081 AU min. Earth dist. -1238 Dec 18 j 19:45 15°**Ц**46'27 17.58423 AU retrograde -1244 Sep 07 j 01:32 20°832'48 direct -1237 Mar 03 j 04:22 13°**II**43'59 opposition -1244 Nov 20 j 16:18 18°\begin{align*} 30'33 0°-8'-2 \end{align*} min. Earth dist. -1244 Nov 21 j 07:13 18°**8**28'56 17.95554 AU -1237 Jun 22 j 22:37 18°**Ⅲ**09'33 0°15'38 conjunction -1243 Feb 03 j 12:48 16°**8**27'38 -1237 Jun 22 j 22:37 18°**Д**09'33 0°15'39 direct minimum elong -1237 Jun 22 j 21:46 18°**Ⅲ**09'26 behind sun begin -1243 May 24 j 16:40 20°843'49 0°-5'-34 -1237 Jun 22 j 23:27 18°**Ⅲ**09'41 conjunction behind sun end -1243 May 24 j 16:41 20°**8**43'49 minimum elong 0°05'34 max. Earth dist. -1237 Jun 21 j 19:25 18°**Ⅲ**05'22 19.55769 AU behind sun begin -1243 May 24 j 10:09 20°**8**42'52 retrograde -1237 Oct 10 j 03:58 22°**Ⅲ**31'12 behind sun end -1243 May 24 j 23:12 20°**8**44'46 opposition -1237 Dec 22 j 17:39 20°**Ⅲ**28'46 0°19'15 max. Earth dist. -1243 May 23 j 22:25 20°**8**41'05 19.92098 AU min. Earth dist. -1237 Dec 23 j 16:08 20°**Ⅲ**26'19 17.53220 AU retrograde -1243 Sep 11 j 21:17 25°800'56 -1236 Mar 07 j 04:22 18°**Ц**23'37 direct max. Earth dist. -1236 Jun 25 j 22:36 22°**Д**46'20 19.50691 AU opposition

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Earth dist. -1227 Feb 03 j 10:37 3°**Ω**16'35 17.25150 AU -1227 Apr 19 j 22:09 conjunction -1235 Jul 02 j 05:37 27°**Ⅲ**33'04 0°22'17 direct 1°**Ω**12'15 minimum elong -1235 Jul 02 j 05:37 27°**Ⅲ**33'04 0°22'17 -1235 Aug 12 j 21:57 0ಂಣ conjunction -1227 Aug 10 j 15:10 5°**Ω**45'49 0°41'35 -1235 Oct 19 j 01:31 -1227 Aug 10 j 15:09 retrograde 1°955'47 minimum elong 5°**Ω**45'49 0°41'35 -1227 Aug 09 j 12:35 -1235 Dec 28 j 22:52 30°RⅡ max. Earth dist. 5°**Ω**41'37 19.24965 AU opposition -1235 Dec 31 j 11:50 29° **II** 53'20 0°26'33 retrograde -1227 Nov 26 j 04:14 $10^{\circ}\Omega$ 09'46 min. Earth dist. -1234 Jan 01 j 12:18 29°**Ⅲ**50'40 17.43683 AU opposition -1226 Feb 07 j 13:24 8°**Ω**07'27 0°47'07 direct -1234 Mar 17 j 04:23 27°**Ⅱ**47'37 min. Earth dist. -1226 Feb 08 j 12:36 8°**Ω**04'55 17.25048 AU -1234 May 29 j 23:42 0ಂತಾ direct -1226 Apr 25 j 01:18 6°**Ω**00'38 max. Earth dist. -1234 Jul 06 j 04:48 2°512'25 19.41475 AU conjunction -1226 Aug 15 j 18:43 10° **Ω**34'15 0°42'51 conjunction -1234 Jul 07 j 09:50 2°516'56 0°25'25 minimum elong -1226 Aug 15 j 18:43 $10^{\circ}\Omega$ 34'15 0°42'52 minimum elong -1234 Jul 07 j 09:50 2°9516'56 0°25'26 max. Earth dist. -1226 Aug 14 j 17:16 10° Ω30'13 19.25199 AU retrograde -1234 Oct 24 i 01:11 6°9540'03 retrograde -1226 Dec 01 i 06:17 $14^{\circ}\Omega$ 58'03 opposition -1233 Jan 05 i 10:07 4°537'35 0°29'58 opposition -1225 Feb 12 j 15:42 12° Ω 55'52 0°48'23 min. Earth dist. -1233 Jan 06 j 11:19 4°934'50 17.39435 AU min. Earth dist. -1225 Feb 13 j 12:53 12° Ω 53'34 17.25588 AU direct -1233 Mar 22 i 05:12 2°531'36 direct -1225 Apr 30 j 07:28 10° Ω49'11 max. Earth dist. -1233 Jul 11 j 07:18 6°557'09 19.37435 AU -1225 Aug 14 j 22:37 $15^{\circ}\Omega$ -1233 Jul 12 j 13:52 7°901'55 0°28'23 -1225 Aug 20 j 21:51 $15^{\circ}\Omega$ 22'41 $0^{\circ}43'49$ conjunction conjunction -1233 Jul 12 j 13:52 7°**©**01'55 -1225 Aug 20 j 21:51 15° **Ω**22'41 0°43'50 0°28'24 minimum elong minimum elong -1233 Oct 29 j 01:00 11°525'23 -1225 Aug 19 j 22:10 15° Ω 18'56 19.26041 AU retrograde max. Earth dist. -1232 Jan 10 j 08:56 -1225 Dec $06 \text{ j } 05:35 \quad 19^{\circ} \Omega 46'16$ opposition 9°522'53 0°33'12 retrograde -1224 Feb 17 j 18:25 17° Ω 44'13 0°49'18 min. Earth dist. -1232 Jan 11 j 10:31 9°520'06 17.35629 AU opposition -1232 Mar 26 j 06:50 -1224 Feb 18 j 15:35 17°**Ω**41'56 17.26724 AU direct 7°916'38 min. Earth dist. -1224 May 04 j 11:07 $15^{\circ}\Omega$ 37'41 direct -1232 Jul 16 j 18:18 11°9547'51 0°31'10 -1224 Aug 24 j 01:38 20° **Ω**07'17 19.27460 AU conjunction max. Earth dist. -1232 Jul 16 j 18:18 11°547'51 0°31'11 minimum elong -1232 Jul 15 j 12:43 11°543'13 19.33862 AU -1224 Aug 25 j 00:36 $20^{\circ}\Omega$ 10'55 $0^{\circ}44'29$ max. Earth dist. conjunction retrograde -1232 Nov 02 j 02:17 16°5511'34 minimum elong -1224 Aug 25 j 00:36 $20^{\circ}\Omega 10'55$ opposition -1231 Jan 14 j 08:17 14°509'03 0°36'12 retrograde -1224 Dec 10 j 07:16 $24^{\circ}\Omega 34'12$ min. Earth dist. -1231 Jan 15 j 09:49 14°506'15 17.32306 AU opposition -1223 Feb 21 j 21:03 22° Ω 32'17 0°49'52 direct -1231 Mar 31 j 09:06 12°502'34 min. Earth dist. -1223 Feb 22 j 16:09 22°**Ω**30'14 17.28402 AU -1223 May 09 j 17:15 20°**Ω**25'55 direct -1231 Jul 21 j 22:42 16°534'31 0°33'45 max. Earth dist. -1223 Aug 29 j 06:16 24° **Ω**55'27 19.29390 AU conjunction -1231 Jul 21 j 22:42 16°534'31 0°33'46 minimum elong -1231 Jul 20 j 16:15 16°529'45 19.30808 AU -1223 Aug 30 j 03:02 24° **Ω**58'44 0°44'51 max. Earth dist. conjunction -1231 Nov 07 i 01:58 20°\$58'26 -1223 Aug 30 j 03:02 24°Ω58'44 retrograde minimum elong -1230 Jan 19 j 08:19 18°\$55'53 0°38'57 -1223 Dec 15 i 06:37 $29^{\circ}\Omega 21'37$ opposition retrograde -1230 Jan 20 j 10:08 18°953'04 17.29550 AU min. Earth dist. opposition -1222 Feb 27 i 00:11 27° Ω 19'51 0°50'05 direct -1230 Apr 05 i 10:47 16°549'12 min. Earth dist. -1222 Feb 27 j 19:01 $27^{\circ}\Omega$ 17'49 17.30577 AU max. Earth dist. -1230 Jul 25 j 21:58 21°517'12 19.28348 AU direct -1222 May 14 j 21:11 $25^{\circ}\Omega$ 13'40 max. Earth dist. -1222 Sep 03 j 08:22 29° **Q**42'41 19.31809 AU -1230 Jul 27 j 03:02 21°521'47 0°36'05 conjunction -1230 Jul 27 j 03:02 21°521'47 -1222 Sep $04 \text{ j } 04:33 \quad 29^{\circ} \Omega 45'53 \quad 0^{\circ} 44'53$ minimum elong 0°36'06 conjunction -1230 Nov 12 j 03:58 25°545'47 minimum elong retrograde -1222 Sep 04 j 04:33 29° Ω 45'53 0°44'53 opposition -1229 Jan 24 j 08:54 23°543'15 0°41'26 -1222 Sep 07 j 21:32 0° m -1222 Dec 20 j 07:44 4° الله 40° 40 min. Earth dist. -1229 Jan 25 j 09:42 23°540'32 17.27401 AU retrograde -1229 Apr 10 j 14:34 21°536'27 opposition -1221 Mar 04 j 03:12 2° m 06'39 0°49'57 direct -1229 Jul 31 j 02:19 26°504'55 19.26528 AU min. Earth dist. -1221 Mar 04 j 19:46 2° m 04'53 17.33224 AU max. Earth dist. direct -1221 May 20 j 02:51 0° My 00'40-1229 Aug 01 j 07:15 26°509'29 conjunction 0°38'11 -1221 Sep 09 j 05:40 minimum elong -1229 Aug 01 j 07:14 26°509'29 0°38'12 conjunction 4° m 32'10 0°44'37 -1229 Oct 13 j 12:29 0 $^{\circ}$ Ω minimum elong -1221 Sep 09 j 05:40 4° Mp 32'10 0°44'38 retrograde -1229 Nov 17 j 03:14 0°**£**33'33 max. Earth dist. -1221 Sep 08 j 12:09 4° Mp 29'24 19.34680 AU -1229 Dec 22 j 10:44 30° RS retrograde -1221 Dec 25 j 06:33 8° **m** 54'03opposition -1228 Jan 29 j 10:00 28°531'02 0°43'38 opposition -1220 Mar 08 j 06:08 6° Mp 52'30 0°49'28 -1228 Jan 30 j 10:49 28°528'19 17.25936 AU min. Earth dist. -1220 Mar 08 j 22:01 6° Mp 50'48 17.36310 AU min. Earth dist. -1228 Apr 14 j 16:59 26°524'08 -1220 May 24 j 06:15 4° m/46'43 direct direct

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Attention, astronom	nical year style is used: Tl	ne year -1220	in astronomical co		1221 BCE in historical	counting style		
conjunction	-1220 Sep 13 j 05:50	9° m ,17′20	0°44'02	conjunction	-1212 Oct 19 j 22:19			
minimum elong	-1220 Sep 13 j 05:49	9° ™ 17'20	0°44'02	minimum elong	-1212 Oct 19 j 22:19			
max. Earth dist.	-1220 Sep 12 j 12:54	9° ™ 14'40	19.37994 AU	max. Earth dist.	-1212 Oct 20 j 00:10		19.80311 AU	
retrograde	-1220 Dec 29 j 06:53	13° m 38'37		retrograde	-1211 Feb 04 j 01:56	20° ≏ 36′00		
opposition	-1219 Mar 13 j 08:51	11° m 37'08	0°48'38	opposition	-1211 Apr 20 j 16:43	18° ≏ 35'25	0°31'41	
min. Earth dist.	-1219 Mar 13 j 22:32	11°My35'41	17.39835 AU	min. Earth dist.	-1211 Apr 20 j 13:54	18° ≏ 35'43	17.83733 AU	
direct	-1219 May 29 j 10:47	9° m 31'34		direct	-1211 Jul 06 j 22:40	16° ≙ 32'41		
conjunction	-1219 Sep 18 j 05:16	-		conjunction	-1211 Oct 24 j 14:16		0°27'07	
minimum elong	-1219 Sep 18 j 05:17	14° Mp 01'12	0°43'09	minimum elong	-1211 Oct 24 j 14:16		0°27'07	
max. Earth dist.	-1219 Sep 17 j 15:23		19.41734 AU	max. Earth dist.	-1211 Oct 24 j 18:32		19.87231 AU	
retrograde	-1218 Jan 03 j 05:01	18° m) 21'47	0047120	retrograde	-1210 Feb 08 j 20:29		0020124	
opposition	-1218 Mar 18 j 11:26	16° m 20'24		opposition	-1210 Apr 25 j 15:19		0°28'34	
min. Earth dist.	-1218 Mar 18 j 23:47	-	17.43780 AU	min. Earth dist.	-1210 Apr 25 j 09:35		17.90724 AU	
direct	-1218 Jun 03 j 13:48	14° Mp 15'04		direct	-1210 Jul 11 j 21:52	21° 22 02'29		
conjunction	-1218 Sep 23 j 03:38	18° m) 43'32	0°41'59	conjunction	-1210 Oct 29 j 05:27	25°Ω19'15	0°24'15	
minimum elong	-1218 Sep 23 j 03:38	18° m) 43'32		minimum elong	-1210 Oct 29 j 05:27			
max. Earth dist.	-1218 Sep 23 j 03:38		19.45913 AU	max. Earth dist.	-1210 Oct 29 j 03:27			
retrograde	-1217 Jan 08 j 04:04	23° M) 03'25	19.43913 AU	retrograde	-1209 Feb 13 j 13:00		19.94264 AU	
opposition	-1217 Mar 23 j 13:36	21° m) 02'04	0°46'01	opposition	-1209 Apr 30 j 13:20		0°25'18	
min. Earth dist.	-1217 Mar 23 j 23:43	-•	17.48189 AU	min. Earth dist.	-1209 Apr 30 j 06:38			
direct	-1217 Wai 23 j 23.43 -1217 Jun 08 j 17:18		17.40109 AU	direct	-1209 Apr 30 j 00:38 -1209 Jul 16 j 17:16		17.97632 AU	
unect	-121/Juli 08 j 17.18	10 11/3039		direct	-1209 Jul 10 J 17.10	23 == 30 24		
conjunction	-1217 Sep 28 j 01:04	23° m 24'12	0°40'32	conjunction	-1209 Nov 02 j 19:46	29° ≏ 45'32	0°21'16	
minimum elong	-1217 Sep 28 j 01:04		0°40'32	minimum elong	-1209 Nov 02 j 19:46		0°21'15	
max. Earth dist.	-1217 Sep 27 j 15:32		19.50553 AU	max. Earth dist.	-1209 Nov 03 j 03:51		20.01417 AU	
retrograde	-1216 Jan 13 j 00:56				-1209 Nov 06 j 17:53	0° M .		
opposition	-1216 Mar 27 j 15:23	25° m/42'02	0°44'15	retrograde	-1208 Feb 18 j 06:48	3°M57'52		
min. Earth dist.	-1216 Mar 27 j 23:26	-•		opposition	-1208 May 04 j 10:30	1°ML57'47	0°21'54	
direct	-1216 Jun 12 j 20:07			min. Earth dist.	-1208 May 04 j 01:01		18.04961 AU	
	,				-1208 Jul 08 j 16:13	30° RΩ		
conjunction	-1216 Oct 01 j 21:30	28° M 03'07	0°38'50	direct	-1208 Jul 20 j 14:44	29° £ 56'23		
minimum elong	-1216 Oct 01 j 21:30	28° M 03'07	0°38'50		-1208 Aug 01 j 10:12	0° M ₊		
max. Earth dist.	-1216 Oct 01 j 13:25		19.55649 AU		e j			
	-1216 Nov 02 j 23:51	0∘ ⊽		conjunction	-1208 Nov 06 j 09:16	4°ML09'53	0°18'10	
retrograde	-1215 Jan 16 j 22:07	2° £ 21'26		minimum elong	-1208 Nov 06 j 09:16	4°ML09'53	0°18'09	
opposition	-1215 Apr 01 j 16:36	0° £ 20'14	0°42'13	max. Earth dist.	-1208 Nov 06 j 19:20	4°M11'25	20.08526 AU	
min. Earth dist.	-1215 Apr 01 j 22:30	0° £ 19'36	17.58383 AU	retrograde	-1207 Feb 21 j 21:58	8°M21'20		
	-1215 Apr 09 j 17:18	30°R M)		opposition	-1207 May 09 j 07:07	6°ML21'22	0°18'23	
direct	-1215 Jun 17 j 22:16	28° m 15'47		min. Earth dist.	-1207 May 08 j 20:58	6°ML22'24	18.12052 AU	
	-1215 Aug 21 j 21:57	0∘ ⊽		direct	-1207 Jul 25 j 08:58	4°M20'23		
conjunction	-1215 Oct 06 j 17:09	2° £ 40′16		conjunction	-1207 Nov 10 j 21:58	8°M32'14		
minimum elong	-1215 Oct 06 j 17:09	2° ≏ 40'16		minimum elong	-1207 Nov 10 j 21:59	8°M32'14	0°14'58	
max. Earth dist.	-1215 Oct 06 j 12:18		19.61222 AU	behind sun begin	-1207 Nov 10 j 19:18	8°MJ31'50		
retrograde	-1214 Jan 21 j 17:46	6° £ 57'44		behind sun end	-1207 Nov 11 j 00:39	8°M32'38		
opposition	-1214 Apr 06 j 17:29	4° £ 56'40		max. Earth dist.	-1207 Nov 11 j 09:25		20.15586 AU	
min. Earth dist.	-1214 Apr 06 j 20:41		17.64166 AU	retrograde	-1206 Feb 26 j 14:21	12°M42'48		
direct	-1214 Jun 23 j 00:29	2° ≏ 52'37		opposition	-1206 May 14 j 02:52	10°M42'55		
				min. Earth dist.	-1206 May 13 j 13:58		18.19061 AU	
conjunction	-1214 Oct 11 j 11:39	7° £ 15'37		direct	-1206 Jul 30 j 04:45	8°M42'19		
minimum elong	-1214 Oct 11 j 11:39	7° ≏ 15'37	0°34'44					
max. Earth dist.	-1214 Oct 11 j 08:40		19.67226 AU	conjunction	-1206 Nov 15 j 09:47			
retrograde	-1213 Jan 26 j 13:08	11° ≏ 32'17		minimum elong	-1206 Nov 15 j 09:47		0°11'44	
opposition	-1213 Apr 11 j 17:52	9° £ 31'21		behind sun begin	-1206 Nov 15 j 05:05			
min. Earth dist.	-1213 Apr 11 j 19:12		17.70374 AU	behind sun end	-1206 Nov 15 j 14:28			
direct	-1213 Jun 28 j 00:34	7° £ 27'43		max. Earth dist.	-1206 Nov 15 j 23:19		20.22537 AU	
				_	-1206 Dec 22 j 02:19			
conjunction	-1213 Oct 16 j 05:27	11° £ 49'13		retrograde	-1205 Mar 03 j 04:15			
minimum elong	-1213 Oct 16 j 05:27	11° ≏ 49'13		opposition	-1205 May 18 j 21:56			
max. Earth dist.	-1213 Oct 16 j 05:22		19.73622 AU	min. Earth dist.	-1205 May 18 j 08:30		18.25962 AU	
retrograde	-1212 Jan 31 j 08:06	16° £ 05'01	002.412.0	11	-1205 May 19 j 21:34			
opposition	-1212 Apr 15 j 17:26			direct	-1205 Aug 03 j 21:41			
min. Earth dist.	-1212 Apr 15 j 15:58		1/./691/ AU		-1205 Oct 12 j 22:09	13°IIL		
direct	-1212 Jul 02 j 01:09	12~4401'05		conjunction	-1205 Nov 19 i 20:46			

conjunction

-1205 Nov 19 j 20:46 17°**M**10'45 0°08'27

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Earth dist. -1204 May 21 j 23:46 19°M21'26 18.32754 AU behind sun begin 16°**х** 26′32 -1198 Dec 18 j 09:13 direct -1204 Aug 07 j 15:16 17° ML 19'52 behind sun end 16°**₹**27'27 -1198 Dec 19 j 07:49 max. Earth dist. 16°**尽**30'47 20.74354 AU conjunction -1204 Nov 23 j 06:59 21°M26'54 0°05'10 retrograde -1197 Apr 06 j 04:07 20° ₹ 30'55 minimum elong -1204 Nov 23 j 06:58 21°M26'54 0°05'09 min. Earth dist. -1197 Jun 21 j 23:28 18° ₹34'17 18.77231 AU -1204 Nov 23 j 00:38 21°M25'58 -1197 Jun 23 j 00:16 18° ₹31'48 behind sun begin opposition 0°-17'-27 -1204 Nov 23 j 13:19 21°M27'50 -1197 Sep 07 j 11:03 16° ₹34'20 behind sun end direct max. Earth dist. -1204 Nov 23 j 23:57 21°M29'27 20.36121 AU retrograde -1203 Mar 11 j 07:09 25°M34'52 conjunction -1197 Dec 22 j 12:14 20° ₹32'12 0°-17'-16 opposition -1203 May 27 j 09:10 23°M235'09 0°03'48 minimum elong -1197 Dec 22 j 12:13 20° ₹32'12 0°17'18 min. Earth dist. -1203 May 26 j 16:28 23°M36'51 18.39453 AU max. Earth dist. -1197 Dec 23 j 13:57 20° ₹35'58 20.79991 AU direct -1203 Aug 12 j 06:48 21°M35'34 retrograde -1196 Apr 09 j 15:37 24° ₹35'36 min. Earth dist. -1196 Jun 25 j 10:17 22° ₹39'12 18.82695 AU conjunction -1203 Nov 27 j 16:12 25°M41'03 0°01'50 opposition -1196 Jun 26 j 12:17 22° ₹ 36'36 0°-20'-44 minimum elong -1203 Nov 27 j 16:12 25°M41'03 direct -1196 Sep 10 j 21:02 20° ₹39'27 behind sun begin -1203 Nov 27 i 09:40 25°ML40'06 behind sun end -1203 Nov 27 j 22:44 25°ML42'00 conjunction -1196 Dec 25 i 18:15 24° ₹ 36'19 0°-20'-11 max. Earth dist. -1203 Nov 28 i 10:18 25°ML43'45 20.42785 AU minimum elong -1196 Dec 25 i 18:15 24° ₹ 36'19 0°20'14 retrograde -1202 Mar 15 j 20:57 29° ML 48'13 max. Earth dist. -1196 Dec 26 j 21:32 24° ₹ 40'17 20.85248 AU min. Earth dist. -1202 May 31 j 06:12 27° ML50'31 18.46083 AU retrograde -1195 Apr 13 j 23:38 28° ₹39'15 -1202 Jun 01 j 01:35 27° ML 48'33 0°00'08 opposition -1195 Jun 30 j 23:56 26° **1**40'20 0°-23'-53 opposition -1202 Jun 14 j 15:00 27° ML16'05 min. Earth dist. -1195 Jun 29 j 22:04 26° **x** 42'55 18.87746 AU desc. node -1202 Aug 16 j 21:56 25° ML49'18 direct -1195 Sep 15 j 06:15 24° ₹ 43'28 direct -1202 Dec 02 j 01:00 29°ML53'20 0°-1'-33 -1195 Dec 29 j 23:50 28° ₹ 39'22 0°-22'-59 conjunction conjunction -1202 Dec 02 j 00:59 29°M 53'20 0°01'34 -1195 Dec 29 j 23:50 28° **x** 39'22 0°23'00 minimum elong minimum elong -1202 Dec 01 j 18:27 29°M52'23 -1195 Dec 31 j 02:37 28° ₹ 43'16 20.90076 AU behind sun begin max. Earth dist. -1202 Dec 02 j 07:31 29°M54'17 -1194 Jan 22 j 12:24 0°る behind sun end -1202 Dec 02 j 21:26 29°M 56'23 20.49365 AU -1194 Apr 18 j 10:03 2°る41'54 max. Earth dist. retrograde -1202 Dec 03 j 21:37 -1194 Jul 04 j 08:21 0°る45'41 18.92341 AU 0°**√** min. Earth dist. 0°る43'02 0°-26'-54 -1201 Mar 20 j 07:49 -1194 Jul 05 j 10:56 retrograde 3°**₹**759'45 opposition opposition -1201 Jun 05 j 17:08 2°**₹**00'10 0°-3'-29 -1194 Jul 23 j 20:48 30°R ✗️ min. Earth dist. -1201 Jun 04 j 21:07 2°**尽**02'11 18.52630 AU direct -1194 Sep 19 j 14:52 28°**х** 46′23 direct -1201 Aug 21 j 11:49 0°**∡**'01'16 -1194 Nov 13 j 06:51 0°ರ -1201 Dec 06 j 09:00 4°**₹**03'56 0°-4'-50 conjunction -1193 Jan 03 j 05:26 2°**ප්**41'25 0°-25'-39 conjunction -1201 Dec 06 j 08:59 4°**₹**03'56 0°04'52 -1193 Jan 03 j 05:26 2°**ප්**41'25 0°25'41 minimum elong minimum elong -1201 Dec 06 j 02:37 4°**∡**03'00 max. Earth dist. -1193 Jan 04 j 09:20 2°る45'27 20.94405 AU behind sun begin behind sun end -1201 Dec 06 j 15:22 4°**₹**04'51 -1193 Apr 22 j 17:47 6°る43'32 retrograde 4°**₹**07'04 20.55865 AU -1193 Jul 09 i 21:11 4°る44'41 0°-29'-47 max. Earth dist. -1201 Dec 07 i 06:10 opposition 4°る47'17 18.96413 AU retrograde -1200 Mar 23 j 20:57 8°**₹**09'38 min. Earth dist. -1193 Jul 08 i 19:03 min. Earth dist. -1200 Jun 08 i 09:30 6° **₹**12'24 18.59072 AU direct -1193 Sep 23 j 23:06 2°る48'13 opposition -1200 Jun 09 i 07:52 6°**∡**10′09 0°-7'-5 direct -1200 Aug 25 j 00:50 4°**٪** 11'37 -1192 Jan 07 i 10:39 6°**ප**42'26 0°-28'-11 conjunction -1192 Jan 07 i 10:38 6°る42'26 0°28'13 minimum elong -1200 Dec 09 j 16:27 8°**₹**12'58 0°-8'-2 max. Earth dist. -1192 Jan 08 i 13:36 6°る46'20 20.98221 AU conjunction retrograde -1200 Dec 09 j 16:27 8°**҂**12'58 0°08'04 -1192 Apr 26 j 02:44 10°₹44'11 minimum elong 8°**х** 12′07 -1192 Jul 12 j 04:28 behind sun begin -1200 Dec 09 j 10:36 min. Earth dist. 8°る47'57 18.99972 AU behind sun end -1200 Dec 09 j 22:18 8°**х** 13′48 opposition -1192 Jul 13 j 06:57 8°る45'19 0°-32'-30 max. Earth dist. -1200 Dec 10 j 15:51 8° ₹ 16'26 20.62224 AU direct -1192 Sep 27 j 06:23 6°る48'57 retrograde -1199 Mar 28 j 06:49 12° ₹ 18'02 -1199 Jun 13 j 22:04 10°**尽** 18'40 0°-10'-37 -1191 Jan 10 j 15:34 10°₹42'26 0°-30'-34 opposition conjunction -1191 Jan 10 j 15:34 10°**ठ**42'26 0°30'36 -1199 Jun 12 j 23:13 10° ₹ 20'58 18.65351 AU min. Earth dist. minimum elong -1199 Aug 29 j 13:05 -1191 Jan 11 j 19:35 10°₹46'28 21.01514 AU direct 8°**х** 20′31 max. Earth dist. -1191 Apr 30 j 10:08 14°₹43'51 retrograde conjunction -1199 Dec 13 j 23:24 12° ₹20'37 0°-11'-11 opposition -1191 Jul 17 j 16:12 12°₹44'56 0°-35'-3 minimum elong -1199 Dec 13 j 23:24 12° ₹ 20'37 0°11'13 min. Earth dist. -1191 Jul 16 j 14:03 12°**정**47'33 19.03019 AU behind sun begin -1199 Dec 13 j 18:31 12° ₹ 19'55 direct -1191 Oct 01 j 13:44 10°정48'40 behind sun end -1199 Dec 14 j 04:18 12° ₹21'19 max. Earth dist. -1199 Dec 14 j 23:15 12° ₹ 24'08 20.68412 AU -1190 Jan 14 j 20:18 14° ₹41'29 0°-32'-48 conjunction retrograde -1198 Apr 01 j 19:18 16° ₹25'06 -1190 Jan 14 j 20:18 14°₹41'28 0°32'50 minimum elong

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1190 in astronomical counting style is the year 1191 BCE in historical counting style. -1190 Jan 15 j 23:24 14°정45'22 21.04336 AU max. Earth dist. conjunction -1182 Feb 15 i 11:50 16°≈17'44 0°-44'-8 minimum elong -1190 May 04 j 18:22 18°る42'37 -1182 Feb 15 j 11:49 16°≈17'44 0°44'08 retrograde min. Earth dist. -1190 Jul 20 j 22:26 16°정46'15 19.05624 AU max. Earth dist. -1182 Feb 16 j 11:47 16°≈21'09 21.11871 AU -1190 Jul 22 j 00:45 16°정43'38 0°-37'-24 -1182 Jun 06 j 08:50 20°≈19'07 opposition retrograde -1190 Oct 05 j 19:59 14°**3**47'24 direct -1182 Aug 22 j 10:35 18°≈22'04 19.11410 AU min. Earth dist. -1182 Aug 23 j 08:17 18°≈19'52 opposition 0°-49'-4 conjunction -1189 Jan 19 j 01:02 18°₹39'39 0°-34'-51 -1182 Nov 06 j 08:50 16°≈23'52 direct -1189 Jan 19 j 01:02 18° 중39'39 0°34'53 minimum elong -1189 Jan 20 j 05:07 18°정43'41 21.06712 AU -1181 Feb 19 j 18:12 20°≈15'23 0°-44'-39 max. Earth dist. conjunction -1189 May 09 j 01:19 22°る40'34 -1181 Feb 19 j 18:12 20°≈15'23 0°44'41 retrograde minimum elong -1189 Jul 25 j 06:50 20°정44'07 19.07792 AU -1181 Feb 20 j 17:52 20°≈18'45 21.10711 AU min. Earth dist. max. Earth dist. -1189 Jul 26 j 08:50 20°정41'31 0°-39'-35 -1181 Jun 10 j 16:53 24°≈17'03 opposition retrograde -1189 Oct 10 j 01:54 18°₹45'21 -1181 Aug 27 j 14:29 22°≈17'46 direct opposition 0°-49'-32 min. Earth dist. -1181 Aug 26 j 18:01 22°≈19'50 19.09954 AU conjunction -1188 Jan 23 j 05:30 22°₹37'07 0°-36'-44 direct -1181 Nov 10 j 13:53 20°≈21'42 minimum elong -1188 Jan 23 j 05:30 22°**ろ**37'07 0°36'47 max. Earth dist. -1188 Jan 24 j 08:34 22°정40'59 21.08682 AU conjunction -1180 Feb 24 j 00:43 24°≈13'33 0°-44'-58 retrograde -1188 May 12 j 09:28 26° ₹37'53 minimum elong -1180 Feb 24 j 00:43 24°≈13'33 0°44'59 opposition -1188 Jul 29 j 16:25 24°る38'46 0°-41'-34 max. Earth dist. -1180 Feb 24 j 21:51 24°≈16'33 21.08969 AU min. Earth dist. -1188 Jul 28 j 14:23 24°정41'22 19.09570 AU retrograde -1180 Jun 14 j 02:15 28°≈15'34 direct -1188 Oct 13 j 07:22 22°る42'38 opposition -1180 Aug 30 j 20:44 26°≈16'11 0°-49'-45 min. Earth dist. -1180 Aug 30 j 01:50 26°≈18'06 19.07916 AU -1180 Nov 13 j 17:51 24°≈19'58 conjunction -1187 Jan 26 i 10:10 26° ₹34'04 0°-38'-27 direct minimum elong -1187 Jan 26 j 10:09 26°る34'04 0°38'28 max. Earth dist. -1187 Jan 27 j 14:07 26° 정38'03 21.10258 AU conjunction -1179 Feb 27 i 07:56 28°≈12'14 0°-45'-4 -1187 Apr 08 j 10:57 0°≈ minimum elong -1179 Feb 27 i 07:56 28°≈12'14 0°45'06 -1187 May 16 j 16:23 0°≈34'45 max. Earth dist. -1179 Feb 28 i 04:32 28°≈15'09 21.06637 AU retrograde -1187 Jun 24 j 20:15 30°R♂ -1179 Apr 01 j 00:35 0°**₩** opposition -1187 Aug 02 j 23:42 28°る35'36 0°-43'-20 retrograde -1179 Jun 18 j 10:29 2° **)** 14'37 -1187 Aug 01 j 22:02 28°る38'10 19.10952 AU -1179 Sep 03 j 09:15 min. Earth dist. min. Earth dist. 0°**升**16'54 19.05292 AU -1187 Oct 17 j 12:12 26°る39'31 -1179 Sep 04 j 02:51 0°**升**15'06 0°-49'-44 direct opposition -1186 Jan 21 j 15:24 -1179 Sep 10 j 08:05 30°R≈ 0°≈ -1179 Nov 17 j 22:40 28°≈18'43 direct -1178 Jan 21 j 21:46 -1186 Jan 30 j 14:44 0°≈30'41 0°-39'-58 0°**∀** conjunction -1186 Jan 30 j 14:44 0°≈30'41 0°40'00 minimum elong -1178 Mar 03 j 15:25 -1186 Jan 31 j 17:28 conjunction 2°\dagger11'27 0°-44'-56 max. Earth dist. 0°≈34'30 21.11451 AU 2°**升**11'27 0°44'58 -1186 May 21 j 00:45 -1178 Mar 03 j 15:25 retrograde 4°≈31'23 minimum elong min. Earth dist. -1186 Aug 06 j 05:19 2°≈34'44 19.11946 AU max. Earth dist. -1178 Mar 04 j 09:20 2°**升**14'00 21.03754 AU opposition -1186 Aug 07 j 06:40 2°≈32'12 0°-44'-55 retrograde -1178 Jun 22 j 20:18 6°**)** 14'15 direct -1186 Oct 21 j 16:47 0°≈36'09 opposition -1178 Sep 08 j 09:01 4° **)** 14'34 0°-49'-29 min. Earth dist. -1178 Sep 07 j 17:10 4°**升**16'11 19.02145 AU -1185 Feb 03 j 19:41 4°≈27'11 0°-41'-18 direct -1178 Nov 22 j 03:37 2°**升**17'56 conjunction -1185 Feb 03 j 19:41 4°≈27'11 0°41'20 minimum elong max. Earth dist. -1185 Feb 04 j 23:00 4°≈31'05 21.12230 AU -1177 Mar 07 j 23:31 6°**)** 11'15 0°-44'-35 conjunction retrograde -1185 May 25 j 07:50 8°**≈**27'56 -1177 Mar 07 j 23:31 6°**升**11'15 0°44'36 minimum elong -1177 Mar 08 i 16:56 6°**¥**13'43 21.00359 AU opposition -1185 Aug 11 j 13:11 6°≈28'45 0°-46'-17 max. Earth dist. 6°≈31'14 19.12509 AU -1177 Jun 27 j 04:35 10° **X** 14'28 min. Earth dist. -1185 Aug 10 j 12:30 retrograde -1185 Oct 25 j 21:19 4°≈32'45 8°**)** 14'37 0°-48'-59 direct opposition -1177 Sep 12 j 15:01 8°**¥**16'07 18.98514 AU min. Earth dist. -1177 Sep 12 i 00:22 -1184 Feb 08 i 00:43 8°≈23'45 0°-42'-27 direct -1177 Nov 26 j 08:20 6°¥17'45 conjunction -1184 Feb 08 i 00:43 8°≈23'45 0°42'28 minimum elong max. Earth dist. -1184 Feb 09 j 02:27 8°≈27'25 21.12587 AU -1176 Mar 11 j 07:54 10° \(\mathbf{H} \) 11'42 0°-44'-1 conjunction retrograde -1184 May 28 j 16:18 12°≈24'40 minimum elong -1176 Mar 11 j 07:54 10° **H** 11'42 0°44'03 -1176 Mar 11 j 22:43 10° ¥ 13'48 20.96532 AU opposition -1184 Aug 14 j 19:43 10°≈25'27 0°-47'-26 max. Earth dist. min. Earth dist. -1184 Aug 13 j 19:46 10°≈27'52 19.12642 AU retrograde -1176 Jun 30 j 14:32 14° **H** 15'26 direct -1184 Oct 29 j 00:52 8°≈29'29 opposition -1176 Sep 15 j 21:15 12° ¥ 15'23 0°-48'-15 min. Earth dist. -1176 Sep 15 j 08:18 12° **∺** 16'42 18.94494 AU -1183 Feb 11 j 06:02 12°≈20'34 0°-43'-23 direct -1176 Nov 29 j 13:44 10° **∺** 18'13 conjunction -1183 Feb 11 j 06:02 12°≈20'34 0°43'25 minimum elong -1183 Feb 12 j 08:05 12°≈24'16 21.12478 AU -1175 Mar 15 j 16:55 14° **★** 12'55 0°-43'-14 max. Earth dist. conjunction -1175 Mar 15 j 16:55 14° **★** 12'55 0°43'15 -1183 Apr 03 j 05:47 15°≈ minimum elong -1175 Mar 16 j 07:22 14° **H** 14'58 20.92327 AU retrograde -1183 Jun 01 j 23:58 16°≈21'40 max. Earth dist. -1183 Aug 03 j 06:00 15°R≈ retrograde -1175 Jul 04 j 23:43 18° ★ 17'11 min. Earth dist. -1183 Aug 18 j 03:04 14°≈24'46 19.12282 AU opposition -1175 Sep 20 j 03:34 16° **★** 16'58 0°-47'-16 opposition -1183 Aug 19 j 02:05 14°≈22'28 0°-48'-22 min. Earth dist. -1175 Sep 19 j 15:41 16° ★18'11 18.90113 AU direct -1183 Nov 02 j 05:41 12°≈26'29 direct -1175 Dec 03 j 19:18 14° **∺** 19'31

-1182 Jan 23 j 07:25 15°≈

-	omena of Uranus fr		•	* *			ge 16
Attention, astronom	nical year style is used: Tl	•					
conjunction	-1174 Mar 20 j 02:32			conjunction	-1166 Apr 23 j 12:28		
minimum elong	-1174 Mar 20 j 02:32	18° ¥ 15′03	0°42'15	minimum elong	-1166 Apr 23 j 12:28		
max. Earth dist.	-1174 Mar 20 j 14:16	18° ¥ 16'43	20.87798 AU	max. Earth dist.	-1166 Apr 23 j 07:46		20.41855 AU
retrograde	-1174 Jul 09 j 09:40	22° 米 19′55		retrograde	-1166 Aug 12 j 12:11	25° Ƴ 34'14	
opposition	-1174 Sep 24 j 10:02	20°) 19'31	0°-46'-3	opposition	-1166 Oct 27 j 04:38	23° Y '32'53	0°-28'-15
min. Earth dist.	-1174 Sep 24 j 00:01	20°) €20'33	18.85435 AU	min. Earth dist.	-1166 Oct 27 j 09:13	23° Y '32'24	18.38374 AU
direct	-1174 Dec 08 j 00:48	18° ¥ 21'47		direct	-1165 Jan 09 j 18:29	21° Y 32'36	
conjunction	-1173 Mar 24 j 12:58	22° ₩ 18'15	0°-41'-1	conjunction	-1165 Apr 28 j 05:50	25° Y 39'20	0°-24'-7
minimum elong	-1173 Mar 24 j 12:58	22° ₭ 18'15	0°41'02	minimum elong	-1165 Apr 28 j 05:50	25° Y '39'20	0°24'07
max. Earth dist.	-1173 Mar 25 j 00:12	22° 米 19′51	20.82976 AU	max. Earth dist.	-1165 Apr 27 j 23:49	25° Ƴ 38′27	20.34868 AU
retrograde	-1173 Jul 13 j 20:22	26°) €23'46		retrograde	-1165 Aug 17 j 03:49	29° Y 51'20	
opposition	-1173 Sep 28 j 16:48	24°) 23′14	0°-44'-36	opposition	-1165 Oct 31 j 15:20	27° Y 49'50	0°-25'-7
min. Earth dist.	-1173 Sep 28 j 07:48	24°) €24'09	18.80473 AU	min. Earth dist.	-1165 Oct 31 j 21:02	27° Ƴ 49'14	18.31279 AU
direct	-1173 Dec 12 j 07:28	22° ¥ 25′13		direct	-1164 Jan 14 j 06:49	25° Y 49'08	
conjunction	-1172 Mar 27 j 23:46	26°) 22'41	0°-39'-36	conjunction	-1164 May 01 j 23:41	29° Ƴ 57'21	0°-21'-12
minimum elong	-1172 Mar 27 j 23:46	26°) €22'41		minimum elong	-1164 May 01 j 23:41		0°21'12
max. Earth dist.	-1172 Mar 28 j 08:13		20.77897 AU	max. Earth dist.	-1164 May 01 j 14:26		20.27696 AU
man zarm ulov.	-1172 Jun 12 j 20:56	0°Υ	20.77037110	man. Darun dige.	-1164 May 02 j 17:47	0°8	20.27090110
retrograde	-1172 Jul 17 j 06:35	0° Υ 28'55		retrograde	-1164 Aug 20 j 18:25	4° 8 10'14	
retrograde	-1172 Aug 20 j 23:21	30°R ₩		opposition	-1164 Nov 04 j 02:46	2° 8 08'33	0°-21'-49
opposition	-1172 Aug 20 j 23:21 -1172 Oct 02 j 00:02	28° ¥ 28'15	0°-42'-56	min. Earth dist.	-1164 Nov 04 j 11:10	_	18.24049 AU
min. Earth dist.	-1172 Oct 02 j 00:02 -1172 Oct 01 j 17:00		18.75270 AU	direct	-1163 Jan 17 j 18:33	0° 8 07'23	10.24047 AC
direct	-1172 Dec 15 j 13:21	26° ∺ 29'57	10.73270 AU	direct	-1103 Jan 17 J 10.33	0 007 23	
uncet	-1172 Dec 13 j 13:21 -1171 Mar 24 j 04:57	20 γ (2) 3 γ		conjunction	-1163 May 06 j 18:43	4° 8 17'10	0°-18'-9
	-11/1 Mai 24 J 04.5/	U I		minimum elong	-1163 May 06 j 18:43	4°817'10	0°18'09
conjunction	-1171 Apr 01 j 11:42	0° Y 28'32	0°-37'-59	max. Earth dist.	-1163 May 06 j 08:17	_	20.20426 AU
minimum elong	-1171 Apr 01 j 11:42	0° Υ 28'32	0°38'00	retrograde	-1163 May 06 j 08.17 -1163 Aug 25 j 11:28	8° 8 30'54	20.20426 AU
max. Earth dist.	-1171 Apr 01 j 11:42		20.72573 AU	opposition	-1163 Aug 23 j 11.28 -1163 Nov 08 j 14:32	6° 8 29'03	0°-18'-22
	-1171 Apr 01 j 19.31 -1171 Jul 21 j 18:47	4° Υ 35'30	20.72373 AU	min. Earth dist.	-1163 Nov 08 j 14.32 -1163 Nov 08 j 23:50	_	18.16751 AU
retrograde opposition	3	4 1 33 30 2° Υ 34'43	0°-41'-1	direct	3	4° 8 27'26	18.10/31 AU
11	-1171 Oct 06 j 07:26 -1171 Oct 06 j 01:33		18.69815 AU	direct	-1162 Jan 22 j 08:34	4 02/20	
min. Earth dist.	•	2 1 33 20 0° Υ 36'10	18.09813 AU	:	11/2 M 11 : 14-20	8° 8 38'47	0°-14'-58
direct	-1171 Dec 19 j 21:15	0-13010		conjunction minimum elong	-1162 May 11 j 14:29 -1162 May 11 j 14:29	8° 8 38'47	0°-14'-58 0°14'59
agnismation	-1170 Apr 06 j 00:22	4° Ƴ 35'56	0°-36'-9	behind sun begin	-1162 May 11 j 14.29	8° 8 38'29	0 14 39
conjunction	-1170 Apr 06 j 00:22	4 γ 35 36 4° Υ 35'56		U	, ,	8° 8 39'06	
minimum elong				behind sun end	-1162 May 11 j 16:36		20 12121 ATT
max. Earth dist.	-1170 Apr 06 j 05:03 -1170 Jul 26 j 06:02	4° γ 36'36 8° γ 43'42	20.67003 AU	max. Earth dist.	-1162 May 11 j 01:09 -1162 Aug 30 j 03:09		20.13121 AU
retrograde	-1170 Jul 26 j 06.02 -1170 Oct 10 j 15:28		0°-38'-54	retrograde	-1162 Aug 30 j 03:09 -1162 Nov 13 j 03:14		00 14! 47
opposition min. Earth dist.	-1170 Oct 10 j 13:28		18.64113 AU	opposition min. Earth dist.	-1162 Nov 13 j 05.14 -1162 Nov 13 j 15:06		
	·	6° γ 43°12 4° Υ 43'59	18.04113 AU		-	8° 8 49'19	18.094/1 AU
direct	-1170 Dec 24 j 04:05	4 1 43 39		direct	-1161 Jan 26 j 21:26	8 049 19	
conjunction	-1169 Apr 10 j 14:03	8° Y 45'02	0°-34'-7	conjunction	-1161 May 16 j 10:59	13° 8 02'17	0°-11'-42
minimum elong	-1169 Apr 10 j 14:04	8° Y 45'02	0°34'08	minimum elong	-1161 May 16 j 10:59	13° 8 02'17	0°11'42
max. Earth dist.	-1169 Apr 10 j 17:47	8° Y 45'34	20.61160 AU	behind sun begin	-1161 May 16 j 06:17	13° 8 01'36	
retrograde	-1169 Jul 30 j 19:23	12° Y 53'37		behind sun end	-1161 May 16 j 15:41	13° 8 02'58	
opposition	-1169 Oct 14 j 23:49	10° Y 52'40	0°-36'-33	max. Earth dist.	-1161 May 15 j 20:36	13° 8 00'09	20.05874 AU
min. Earth dist.	-1169 Oct 14 j 21:37	10° Y 52'54	18.58121 AU		-1161 Jun 19 j 14:08	15° 8	
direct	-1169 Dec 28 j 13:21	8° Y 53'31		retrograde	-1161 Sep 03 j 22:07	17° 8 17'46	
				opposition	-1161 Nov 17 j 16:28	15° 8 15'36	0°-11'-6
conjunction	-1168 Apr 14 j 04:31	12° Y 55'55	0°-31'-53	min. Earth dist.	-1161 Nov 18 j 04:50	15° 8 14'16	18.02275 AU
minimum elong	-1168 Apr 14 j 04:31	12° Y 55'55	0°31'53		-1161 Nov 23 j 17:46	15° ₹ 8	
max. Earth dist.	-1168 Apr 14 j 04:46	12° Ƴ 55'57	20.55028 AU	direct	-1160 Jan 31 j 13:07	13° 8 13'06	
retrograde	-1168 Aug 03 j 07:58	17° Ƴ 05′22			-1160 Apr 06 j 13:48	15° ∀	
opposition	-1168 Oct 18 j 08:54	15° Ƴ 04'17	0°-33'-59		-		
min. Earth dist.	-1168 Oct 18 j 09:21	15° Ƴ 04'15	18.51842 AU	conjunction	-1160 May 20 j 08:19	17° 8 27'41	0°-8'-21
direct	-1168 Dec 31 j 21:35	13° Y 04'48		minimum elong	-1160 May 20 j 08:19		0°08'21
	Ÿ			behind sun begin	-1160 May 20 j 02:22		
conjunction	-1167 Apr 18 j 20:05	17° Ƴ 08'36	0°-29'-28	behind sun end	-1160 May 20 j 14:15		
minimum elong	-1167 Apr 18 j 20:05	17° Ƴ 08'36		max. Earth dist.	-1160 May 19 j 15:35		19.98744 AU
max. Earth dist.	-1167 Apr 18 j 19:03		20.48594 AU	retrograde	-1160 Sep 07 j 15:04		
retrograde	-1167 Aug 07 j 22:35			opposition	-1160 Nov 21 j 06:32		0°-7'-19
opposition	-1167 Oct 22 j 18:29		0°-31'-13	min. Earth dist.	-1160 Nov 21 j 21:16		
min. Earth dist.	-1167 Oct 22 j 20:15			direct	-1159 Feb 04 j 03:15		
direct	-1166 Jan 05 j 08:25				,		
	- J 			conjunction	-1150 May 25 i 06:35	210255'04	0° 4' 55

conjunction

-1159 May 25 j 06:35 21°**8**55'04 0°-4'-55

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1159 in astronomical counting style is the year 1160 BCE in historical counting style. -1159 May 25 j 06:35 21°855'04 0°04'56 opposition -1153 Dec 23 j 08:20 21° II 41'42 0° 19'54 minimum elong -1159 May 24 j 23:59 21°854'06 min. Earth dist. -1153 Dec 24 j 06:54 21°**Д**39'14 17.52704 AU behind sun begin -1159 May 25 j 13:11 21°856'02 -1152 Mar 07 j 18:39 19°**Д**36'30 behind sun end direct -1159 May 24 j 12:40 21°852'23 19.91813 AU max. Earth dist. -1159 Sep 12 j 11:41 26°812'17 -1152 Jun 27 j 16:08 24°**Д**03'27 0°19'34 retrograde conjunction -1152 Jun 27 j 16:08 24° **II** 03'27 0°19'34 -1159 Nov 25 j 21:19 24°809'55 0°-3'-28 opposition minimum elong -1152 Jun 26 j 12:39 23° **II**59'13 19.50117 AU -1159 Nov 26 j 12:22 24°**8**08'17 17.88418 AU min. Earth dist. max. Earth dist. -1152 Oct 14 j 16:26 28°**Ц**25'43 direct -1158 Feb 08 j 20:15 22°**8**06'37 retrograde max. Earth dist. -1152 Dec 27 j 05:02 26°Щ23'13 0°23'35 -1158 May 29 j 09:53 26°**8**21'31 19.85098 AU opposition min. Earth dist. -1152 Dec 28 j 05:07 26°**Ц**20'35 17.47667 AU conjunction -1158 May 30 j 05:41 26°\(\mathbf{2}24'30\) 0°-1'-24 direct -1151 Mar 12 j 17:57 24°**Ⅲ**17'42 -1158 May 30 j 05:40 26°**8**24'30 minimum elong 0°01'24 -1158 May 29 j 22:52 26°**8**23'30 -1151 Jul 02 j 19:52 28° **II**45'53 0°22'49 behind sun begin conjunction -1151 Jul 02 j 19:52 28°**Ⅲ**45'53 behind sun end -1158 May 30 j 12:28 26°**8**25'30 minimum elong 0°22'50 -1151 Jul 01 j 14:23 28°**Д**41'19 19.45254 AU -1158 Aug 08 j 00:21 $\Pi^{\circ}0$ max. Earth dist. retrograde -1158 Sep 17 j 06:19 0°**I**I42'33 -1151 Jul 22 j 23:26 0ಂತಾ asc. node -1158 Oct 21 j 20:20 0°**I**I11'27 retrograde -1151 Oct 19 j 15:54 3°9508'37 -1158 Oct 28 j 01:18 30°R8 opposition -1150 Jan 01 j 02:28 1°9506'04 0°27'08 1°503'24 17.42994 AU opposition -1158 Nov 30 j 13:01 28°840'09 0°00'25 min. Earth dist. -1150 Jan 02 j 02:51 min. Earth dist. -1158 Dec 01 j 06:19 28°\(\arrow\) 38'17 17.81838 AU -1150 Jan 27 j 14:11 30°RⅡ direct -1157 Feb 13 j 12:19 26°836'30 direct -1150 Mar 17 j 18:56 29°**Ⅱ**00'15 -1157 May 19 j 16:50 $0^{\circ}\Pi$ -1150 May 04 j 22:13 max. Earth dist. -1157 Jun 03 j 08:24 0°**Д**52'50 19.78653 AU conjunction -1150 Jul 07 i 23:58 3°929'33 0°25'55 conjunction -1157 Jun 04 i 05:34 0°II56'01 0°02'13 minimum elong -1150 Jul 07 i 23:58 3°929'33 0°25'56 -1157 Jun 04 j 05:33 0°**I**I56′01 0°02'13 max. Earth dist. -1150 Jul 06 j 19:02 3°525'03 19.40770 AU minimum elong -1157 Jun 03 j 22:46 0°II55'01 retrograde -1150 Oct 24 j 15:15 7°952'41 behind sun begin -1157 Jun 04 j 12:20 0°II57'01 -1149 Jan 06 j 00:41 5°950'06 0°30'31 behind sun end opposition -1157 Sep 22 j 03:58 5°**Ⅱ**14'55 -1149 Jan 07 j 01:50 5°547'21 17.38729 AU retrograde min. Earth dist. -1157 Dec 05 j 05:28 3°**I**12'30 0°04'21 direct -1149 Mar 22 j 19:47 3°9544'00 opposition 3°**Ⅱ**10'35 17.75524 AU -1157 Dec 05 j 23:02 max. Earth dist. -1149 Jul 11 j 21:43 8°509'32 19.36744 AU min. Earth dist. -1156 Feb 18 j 06:55 1°**Ⅱ**08'32 direct -1156 Jun 07 j 07:45 5°**II**26'16 19.72456 AU -1149 Jul 13 j 04:07 8°9514'17 max. Earth dist. conjunction 0°28'51 -1149 Jul 13 j 04:07 8°9514'17 minimum elong 0°28'52 -1156 Jun 08 j 06:12 5°**Ⅱ**29'40 0°05'46 -1149 Oct 29 j 15:20 12°537'45 conjunction retrograde -1156 Jun 08 j 06:12 5°**I**29'40 0°05'47 -1148 Jan 10 j 23:25 10°535'07 0°33'41 minimum elong opposition -1156 Jun 07 j 23:42 5°**Ⅱ**28'43 -1148 Jan 12 j 00:42 10°532'21 17.34966 AU behind sun begin min. Earth dist. behind sun end -1156 Jun 08 j 12:41 5°**Ⅲ**30'38 direct -1148 Mar 26 j 21:36 8°528'45 retrograde -1156 Sep 25 j 23:56 9°**Ⅱ**49'21 max. Earth dist. -1148 Jul 16 j 03:16 12°555'21 19.33238 AU opposition -1156 Dec 08 j 22:57 7°**II**46'56 0°08'18 -1148 Jul 17 j 08:31 12°559'56 0°31'35 min. Earth dist. -1156 Dec 09 j 18:47 7°**Ⅱ**44'46 17.69456 AU conjunction -1155 Feb 22 j 01:14 5°**Ⅱ**42'40 -1148 Jul 17 j 08:31 12°559'56 direct minimum elong max. Earth dist. -1155 Jun 12 j 07:25 10°**Д**01'40 19.66509 AU -1148 Nov 02 j 15:42 17°523'39 retrograde -1147 Jan 14 j 22:52 15°521'01 0°36'38 opposition -1155 Jun 13 j 07:45 10°**Д**05'23 0°09'17 min. Earth dist. -1147 Jan 16 j 00:07 15°518'15 17.31736 AU conjunction -1155 Jun 13 j 07:44 10°**Д**05'23 0°09'18 -1147 Mar 31 j 23:44 13°514'26 minimum elong direct -1155 Jun 13 j 02:05 10°**Д**04'32 -1147 Jul 21 j 06:47 17°541'38 19.30301 AU behind sun begin max. Earth dist. -1155 Jun 13 j 13:24 10°**Д**06'13 behind sun end -1155 Sep 30 j 22:19 14°**Д**25'48 -1147 Jul 22 j 12:52 17°\$46'21 0°34'07 retrograde conjunction minimum elong opposition -1155 Dec 13 i 17:05 12° II 23'23 0°12'14 -1147 Jul 22 i 12:52 17°546'21 0°34'08 min. Earth dist. -1155 Dec 14 j 13:22 12°**Д**21'10 17.63630 AU retrograde -1147 Nov 07 j 16:12 22°510'16 direct -1154 Feb 26 j 22:17 10°**Д**18'48 opposition -1146 Jan 19 i 22:52 20°507'38 0°39'21 max. Earth dist. -1154 Jun 17 j 08:52 14° ДЗ9'10 19.60784 AU min. Earth dist. -1146 Jan 21 j 00:07 20°504'52 17.29121 AU -1146 Apr 06 j 02:02 18°500'53 direct -1154 Jun 18 j 10:05 14° **II**43'02 0°12'47 conjunction minimum elong -1154 Jun 18 j 10:05 14°**II**43'02 0°12'47 conjunction -1146 Jul 27 j 17:18 22°533'27 0°36'25 behind sun begin -1154 Jun 18 j 05:59 14°**II**42'25 minimum elong -1146 Jul 27 j 17:18 22°533'27 0°36'26 -1154 Jun 18 j 14:11 14°**Д**43'39 -1146 Jul 26 j 12:44 22°\$28'57 19.28005 AU behind sun end max. Earth dist. -1154 Oct 05 j 19:26 19°**Д**04'08 -1146 Nov 12 j 17:28 26°557'29 retrograde retrograde -1154 Dec 18 j 12:23 17°**Ⅲ**01'42 0°16'06 -1145 Jan 24 j 23:30 24°554'54 0°41'47 opposition opposition -1154 Dec 19 j 10:38 16°**Д**59'16 17.58033 AU -1145 Jan 25 j 23:47 24°552'15 17.27151 AU min. Earth dist. min. Earth dist. direct -1153 Mar 03 j 19:23 14°**Д**56'49 direct -1145 Apr 11 j 05:10 22°548'04 max. Earth dist. -1153 Jun 22 j 09:27 19°**Ⅱ**18'15 19.55315 AU conjunction -1145 Aug 01 j 21:24 27°\$21'07 0°38'28 conjunction -1153 Jun 23 j 12:42 19°**Ⅲ**22'26 0°16'13 minimum elong -1145 Aug 01 j 21:24 27°521'07 0°38'29 -1153 Jun 23 j 12:41 19°**Ⅲ**22'26 0°16'14 max. Earth dist. -1145 Jul 31 j 16:51 27°516'37 19.26371 AU minimum elong retrograde -1153 Oct 10 j 18:08 23°**Ⅱ**44'11 -1145 Sep 15 j 16:05 $0^{\circ}\Omega$

•	nical year style is used: The		•	/ /			ge 18
retrograde	-1145 Nov 17 j 18:06	1° Ω 45'15	in astronomical cor	direct	-1137 May 20 j 17:30		•
renograde	-1144 Jan 23 j 10:04	30°RS		direct	-1137 May 20 J 17.30	1 111/1449	
	-1144 Jan 23 j 10.04 -1144 Jan 30 j 00:38	-	0942157		1127 8 00 : 20-20	50 m 46122	0944120
opposition	-	29°542'44		conjunction	-1137 Sep 09 j 20:39	5° Mp 46'23	0°44'30
min. Earth dist.	-1144 Jan 31 j 00:52		17.25862 AU	minimum elong	-1137 Sep 09 j 20:39	5° Mp 46'23	0°44'30
direct	-1144 Apr 15 j 07:26			max. Earth dist.	-1137 Sep 09 j 02:49		19.34471 AU
E d E d	-1144 Jul 01 j 13:35	0° Ω	10.05417 ATT	retrograde	-1137 Dec 25 j 22:00	10° Mp 08'20	0040110
max. Earth dist.	-1144 Aug 04 j 22:29	2°8605'01	19.25417 AU	opposition	-1136 Mar 08 j 21:11	8° Mp 06'47	
. ,.	1144 4 06:01.26	20 0 00110	0040116	min. Earth dist.	-1136 Mar 09 j 13:20		17.36052 AU
conjunction	-1144 Aug 06 j 01:36	2°Ω09'18 2°Ω09'18		direct	-1136 May 24 j 21:12	6° Mp 00′59	
minimum elong	-1144 Aug 06 j 01:36	$6^{\circ}\Omega 33'26$	0°40′16		11266 12:20.40	100 m 21120	0042152
retrograde	-1144 Nov 21 j 19:52		0045147	conjunction	-1136 Sep 13 j 20:48	10° Mp 31'39	0°43'52
opposition	-1143 Feb 03 j 02:01	4° £ 31′03		minimum elong max. Earth dist.	-1136 Sep 13 j 20:48	10° Mp 31'39	0°43'53
min. Earth dist.	-1143 Feb 04 j 00:53	$2^{\circ}\Omega 24'15$	17.25221 AU		1 3		19.37698 AU
direct	-1143 Apr 20 j 11:58 -1143 Aug 10 j 03:11		10.25002 ATT	retrograde	-1136 Dec 29 j 21:48	14° M 52'59	0949126
max. Earth dist.	-1143 Aug 10 J 03:11	0-863343	19.25093 AU	opposition	-1135 Mar 13 j 23:49	12° Mp 51'28	
	1142 A 11:05-26	(0 0 5715 4	0041147	min. Earth dist.	-1135 Mar 14 j 13:36		17.39308 AU
conjunction	-1143 Aug 11 j 05:36	6° Ω 57'54		direct	-1135 May 30 j 01:24	10°11/45'51	
minimum elong	-1143 Aug 11 j 05:36	6° Ω 57'54	0°41'48		1125 0 10:20 15	1.50 m. 1.512.0	0040156
retrograde	-1143 Nov 26 j 20:02		0047110	conjunction	-1135 Sep 18 j 20:15	-	0°42'56
opposition	-1142 Feb 08 j 04:07	9° Ω 19'44		minimum elong	-1135 Sep 18 j 20:15	•	0°42'57
min. Earth dist.	-1142 Feb 09 j 03:06		17.25210 AU	max. Earth dist.	-1135 Sep 18 j 06:20		19.41396 AU
direct	-1142 Apr 25 j 15:04	7° Ω 13'01	10.05050 111	retrograde	-1134 Jan 03 j 20:22	-	00.4511.4
max. Earth dist.	-1142 Aug 15 j 07:55	11° 81 42'44	19.25379 AU	opposition	-1134 Mar 19 j 02:27	•	
		0		min. Earth dist.	-1134 Mar 19 j 14:54		17.43441 AU
conjunction	-1142 Aug 16 j 09:11			direct	-1134 Jun 04 j 05:08	15° m) 29'17	
minimum elong	-1142 Aug 16 j 09:11		0°43'01				
	-1142 Oct 11 j 23:47			conjunction	-1134 Sep 23 j 18:27		
retrograde	-1142 Dec 01 j 21:41			minimum elong	-1134 Sep 23 j 18:27		
	-1141 Jan 23 j 21:50			max. Earth dist.	-1134 Sep 23 j 05:44	•	19.45587 AU
opposition	-1141 Feb 13 j 06:29			retrograde	-1133 Jan 08 j 18:31	24° m 17'39	
min. Earth dist.	-1141 Feb 14 j 03:40		17.25770 AU	opposition	•	22° Mp 16'14	
direct	-1141 Apr 30 j 21:05			min. Earth dist.	-1133 Mar 24 j 14:33	-	17.47888 AU
	-1141 Jul 26 j 20:46	15° 8 2		direct	-1133 Jun 09 j 08:03	20° m) 11'06	
. ,.	1141 4 21:12.24	160 025126	0042157	. ,.	1122 0 20 : 16 02	2.40 m- 2011 0	0°40'14
conjunction	-1141 Aug 21 j 12:34			conjunction minimum elong	-1133 Sep 28 j 16:02	24° M) 38'19	
minimum elong	-1141 Aug 21 j 12:34			· ·	-1133 Sep 28 j 16:02		0°40'15
max. Earth dist.	-1141 Aug 20 j 12:42		19.26209 AU	max. Earth dist.	-1133 Sep 28 j 06:45		19.50290 AU
retrograde	-1141 Dec 06 j 21:16		0040122	retrograde	-1132 Jan 13 j 16:05	-	0042154
opposition	-1140 Feb 18 j 09:10			opposition	-1132 Mar 28 j 06:18		
min. Earth dist.	-1140 Feb 19 j 06:29		17.26870 AU	min. Earth dist.	-1132 Mar 28 j 14:15		17.52834 AU
direct	-1140 May 05 j 01:04	16,9720,22		direct	-1132 Jun 13 j 11:30	24° II y 51'17	
conjunction	-1140 Aug 25 j 15:29	21°Ω24'16	0°44'33	conjunction	-1132 Oct 02 j 12:36	29° m 17'10	0°38'30
minimum elong	-1140 Aug 25 j 15:29			minimum elong	-1132 Oct 02 j 12:36	29° M) 17'10	0°38'29
max. Earth dist.	-1140 Aug 24 j 16:18			max. Earth dist.	-1132 Oct 02 j 04:43		19.55495 AU
retrograde	-1140 Dec 10 j 22:41	25°Ω47'39	19.27307 110	max. Earth dist.	-1132 Oct 13 j 22:19	0ಂ ರ	17.55 175 116
opposition	-1139 Feb 22 j 12:02	23° Ω 45'49	0°49'54	retrograde	-1131 Jan 17 j 12:30	ა _ 3° _ 35'29	
min. Earth dist.	-1139 Feb 22 j 12:02 -1139 Feb 23 j 07:17		17.28465 AU	opposition	-1131 Jan 17 j 12:30 -1131 Apr 02 j 07:41	1° ⊆ 34'17	0°41'49
direct	-1139 May 10 j 07:49		. 7.20703 AU	min. Earth dist.	-1131 Apr 02 j 07.41 -1131 Apr 02 j 13:17		17.58287 AU
311000	1157 May 10 J 07.49	21 063731		mm. Durin dist.	-1131 May 14 j 14:30	30°RM)	17.55207 AU
conjunction	-1139 Aug 30 j 17:55	26°Ω12'27	0°44'51	direct	-1131 May 14 j 14:50	29° My 29'50	
minimum elong	-1139 Aug 30 j 17:55	26°Ω12'27		anout	-1131 Jul 22 j 17:06	0° ⊡	
max. Earth dist.	-1139 Aug 29 j 20:47		19.29397 AU		-1131 Jul 22 j 17.00	v –	
max. Durin dist.	-1139 Nov 10 j 08:00	0° m	.,.2,3,1 110	conjunction	-1131 Oct 07 j 08:16	3° £ 54'19	0°36'31
retrograde	-1139 Dec 15 j 21:50	0° Mp 35'26		minimum elong	-1131 Oct 07 j 08:16	3° ⊆ 54'19	
retrograde	-1138 Jan 21 j 13:46	0 11 0 33 20 30°RΩ		max. Earth dist.	-1131 Oct 07 j 03:47		19.61185 AU
opposition	-1138 Feb 27 j 15:11	28° Ω 33'43	0°50'03	retrograde	-1130 Jan 22 j 09:21	8° £ 11'50	17.01103 AC
min. Earth dist.	-1138 Feb 27 j 13:11 -1138 Feb 28 j 10:15		17.30530 AU	opposition	-1130 Jan 22 j 09:21 -1130 Apr 07 j 08:39	6° £ 10'47	0°39'29
mm. Darm UISt.	-11301°CU 20 J 10.13	26°Ω27'35	17.30330 AU	min. Earth dist.	-1130 Apr 07 j 08.39		0 39 29 17.64178 AU
direct	1139 May 15 i 11:54			iiiii. Laitii uist.	-1130 Apr 07 J 11.40	0 == 1027	17.04176 AU
direct	-1138 May 15 j 11:54			direct	-1130 Jun 23 i 15:27	4° Ω 06'45	
direct	-1138 May 15 j 11:54 -1138 Aug 19 j 22:54	0° m)		direct	-1130 Jun 23 j 15:27	4° ≏ 06'45	
direct			0°44'50	direct	-1130 Jun 23 j 15:27 -1130 Oct 12 j 02:59	4° £ 06'45 8° £ 29'47	0°34'20
	-1138 Aug 19 j 22:54 -1138 Sep 04 j 19:37	0° m					0°34'20 0°34'20
conjunction	-1138 Aug 19 j 22:54 -1138 Sep 04 j 19:37 -1138 Sep 04 j 19:37	0° m, 59'54 0° m, 59'54		conjunction	-1130 Oct 12 j 02:59	8° £ 29'47 8° £ 29'47	
conjunction minimum elong	-1138 Aug 19 j 22:54 -1138 Sep 04 j 19:37	0° m, 59'54 0° m, 59'54	0°44'51	conjunction minimum elong	-1130 Oct 12 j 02:59 -1130 Oct 12 j 02:59	8° £ 29'47 8° £ 29'47	0°34'20
conjunction minimum elong max. Earth dist.	-1138 Aug 19 j 22:54 -1138 Sep 04 j 19:37 -1138 Sep 04 j 19:37 -1138 Sep 03 j 23:07	0° m, 59'54 0° m, 59'54 0° m, 56'39	0°44'51 19.31706 AU	conjunction minimum elong max. Earth dist.	-1130 Oct 12 j 02:59 -1130 Oct 12 j 02:59 -1130 Oct 12 j 00:09	8° £ 29'47 8° £ 29'47 8° £ 29'21	0°34'20 19.67287 AU
conjunction minimum elong max. Earth dist. retrograde	-1138 Aug 19 j 22:54 -1138 Sep 04 j 19:37 -1138 Sep 04 j 19:37 -1138 Sep 03 j 23:07 -1138 Dec 20 j 22:55	0°m, 59'54 0°m, 59'54 0°m, 56'39 5°m, 22'25 3°m, 20'47	0°44'51 19.31706 AU	conjunction minimum elong max. Earth dist. retrograde	-1130 Oct 12 j 02:59 -1130 Oct 12 j 02:59 -1130 Oct 12 j 00:09 -1129 Jan 27 j 04:29	8° £ 29'47 8° £ 29'47 8° £ 29'21 12° £ 46'29 10° £ 45'36	0°34'20 19.67287 AU

•			•	/ *	1130 BCE in historical	, ,	ge 19
direct	-1129 Jun 28 j 14:54	•	in astronomical cot	max. Earth dist.	-1122 Nov 16 j 14:59		
direct	-1129 Juli 26 J 14.34	o ==42 00		max. Earth dist.	-1122 Nov 10 j 14:39 -1122 Nov 30 j 10:22		20.22107 AU
	1120 0-4 16:20-52	120 0 02122	0921157		5		
conjunction	-1129 Oct 16 j 20:53		0°31'56 0°31'55	retrograde	-1121 Mar 03 j 19:14		0910125
minimum elong	-1129 Oct 16 j 20:54			opposition	-1121 May 19 j 13:21		0°10'25
max. Earth dist.	-1129 Oct 16 j 20:59		19.73742 AU	min. Earth dist.	-1121 May 19 j 00:04		18.255/6 AU
retrograde	-1128 Feb 01 j 00:15		0024106	T' A	-1121 Jun 23 j 04:41		
opposition	-1128 Apr 16 j 08:50			direct	-1121 Aug 04 j 12:58		
min. Earth dist.	-1128 Apr 16 j 07:29		17.77048 AU		-1121 Sep 14 j 12:09	13°11L	
direct	-1128 Jul 02 j 16:06	13°2215'35			110131 00:10.07	100 M 2 0114	0007147
	1120 0 4 20 112 50	170 0 25125	0020120	conjunction	-1121 Nov 20 j 12:37		0°07'47
conjunction	-1128 Oct 20 j 13:50			minimum elong	-1121 Nov 20 j 12:37		0°07'47
minimum elong	-1128 Oct 20 j 13:50			behind sun begin behind sun end	-1121 Nov 20 j 06:42		
max. Earth dist.	-1128 Oct 20 j 15:37		19.80441 AU	max. Earth dist.	-1121 Nov 20 j 18:31		20 20001 ATT
retrograde	-1127 Feb 04 j 18:01		0921107		-1121 Nov 21 j 03:17		20.29001 AU
opposition	-1127 Apr 21 j 08:12			retrograde	-1120 Mar 07 j 10:47		0907144
min. Earth dist.	-1127 Apr 21 j 05:26		17.83834 AU	opposition	-1120 May 23 j 07:17		0°06'44
direct	-1127 Jul 07 j 13:58	1/****4/*24		min. Earth dist.	-1120 May 22 j 15:11		18.32385 AU
. ,.	1107.0 / 25 : 06.02	220 0 05151	0026125	direct	-1120 Aug 08 j 06:58	18°IIL35'15	
conjunction	-1127 Oct 25 j 06:02				112031 22:22.26	220M (2120	000 412 0
minimum elong	-1127 Oct 25 j 06:02			conjunction	-1120 Nov 23 j 22:36		0°04'30
max. Earth dist.	-1127 Oct 25 j 10:14		19.8/332 AU	minimum elong	-1120 Nov 23 j 22:37		0°04'28
retrograde	-1126 Feb 09 j 12:43		0005155	behind sun begin	-1120 Nov 23 j 16:12		
opposition	-1126 Apr 26 j 06:54			behind sun end	-1120 Nov 24 j 05:02		
min. Earth dist.	-1126 Apr 26 j 01:23		17.90798 AU	max. Earth dist.	-1120 Nov 24 j 15:36		20.35782 AU
direct	-1126 Jul 12 j 13:18	22° £ 17′25		retrograde	-1119 Mar 11 j 22:31		
				min. Earth dist.	-1119 May 27 j 07:43		
conjunction	-1126 Oct 29 j 21:14			opposition	-1119 May 28 j 00:35		0°03'04
minimum elong	-1126 Oct 29 j 21:14			direct	-1119 Aug 12 j 21:28	22°M50'56	
max. Earth dist.	-1126 Oct 30 j 03:12		19.94317 AU				
	-1125 Jan 02 j 14:44	0°M		conjunction	-1119 Nov 28 j 07:56		0°01'09
retrograde	-1125 Feb 14 j 05:06	0° M 47'32		minimum elong	-1119 Nov 28 j 07:55		0°01'09
	-1125 Mar 30 j 16:14	30° ₹ Ω		behind sun begin	-1119 Nov 28 j 01:24		
opposition	-1125 May 01 j 05:01	28° ≏ 47'20		behind sun end	-1119 Nov 28 j 14:27		
min. Earth dist.	-1125 Apr 30 j 22:31		17.97817 AU	max. Earth dist.	-1119 Nov 29 j 02:12		20.42546 AU
direct	-1125 Jul 17 j 09:25	26° ≏ 45'33			-1118 Jan 24 j 18:45	0° ∡ ¹	
	-1125 Oct 17 j 20:29	0°M₊		retrograde	-1118 Mar 16 j 12:32	1° ≯ 03'38	
				desc. node	-1118 Apr 01 j 23:17	0° ∡ ¹56'53	
conjunction	-1125 Nov 03 j 11:44	1°M00'45			-1118 May 08 j 16:04		
minimum elong	-1125 Nov 03 j 11:44	1°M00'45		opposition	-1118 Jun 01 j 16:52		0°00'-35
max. Earth dist.	-1125 Nov 03 j 19:32		20.01344 AU	min. Earth dist.	-1118 May 31 j 21:16		18.45907 AU
retrograde	-1124 Feb 18 j 22:33	5° ™ 13'08		direct	-1118 Aug 17 j 13:48		
opposition	-1124 May 05 j 02:07	3°M13'04			-1118 Nov 13 j 06:01	0° ∡ ¹	
min. Earth dist.	-1124 May 04 j 16:56		18.04829 AU			_	
direct	-1124 Jul 21 j 06:48	1° M 11'41		conjunction	-1118 Dec 02 j 16:35	1° ≯ '08'46	0°-2'-13
				minimum elong	-1118 Dec 02 j 16:35	1° ≯ 08'46	0°02'16
conjunction	-1124 Nov 07 j 01:20	5°M25'15		behind sun begin	-1118 Dec 02 j 10:03	1° ∡ 107'49	
minimum elong	-1124 Nov 07 j 01:20	5°M25'15	0°17'31	behind sun end	-1118 Dec 02 j 23:07	1° х¹ 09'43	
max. Earth dist.	-1124 Nov 07 j 10:56		20.08338 AU	max. Earth dist.	-1118 Dec 03 j 13:08		20.49251 AU
retrograde	-1123 Feb 22 j 13:30	9° ™ 36'45		retrograde	-1117 Mar 20 j 23:38	5° ∡ 15'11	
opposition	-1123 May 09 j 22:49	7°M36'47		opposition	-1117 Jun 06 j 08:30	3° ∡ 15'36	0°-4'-13
min. Earth dist.	-1123 May 09 j 12:54		18.11806 AU	min. Earth dist.	-1117 Jun 05 j 12:21		18.52575 AU
direct	-1123 Jul 26 j 00:57	5° ™ 35'47		direct	-1117 Aug 22 j 02:31	1° ≯ 16'42	
						_	
conjunction	-1123 Nov 11 j 13:56	9° ™ 47'42	0°14'20	conjunction	-1117 Dec 07 j 00:35	5° ∡ 19'23	0°-5'-29
minimum elong	-1123 Nov 11 j 13:56	9° ™ 47'42	0°14'19	minimum elong	-1117 Dec 07 j 00:34	5° ∡ 19'23	0°05'31
behind sun begin	-1123 Nov 11 j 10:43	9° ™ 47'14		behind sun begin	-1117 Dec 06 j 18:17	5° ∡ 18'28	
behind sun end	-1123 Nov 11 j 17:09	9°M48'11		behind sun end	-1117 Dec 07 j 06:52	5° ∡ 120'18	
max. Earth dist.	-1123 Nov 12 j 01:08		20.15290 AU	max. Earth dist.	-1117 Dec 07 j 22:01		20.55867 AU
retrograde	-1122 Feb 27 j 06:11	13°M58'18		retrograde	-1116 Mar 24 j 12:10	9° х 25′06	
opposition	-1122 May 14 j 18:31	11°M58'24		opposition	-1116 Jun 09 j 23:12	7° ∡ ¹25'38	0°-7'-48
min. Earth dist.	-1122 May 14 j 05:50		18.18719 AU	min. Earth dist.	-1116 Jun 09 j 00:42		18.59124 AU
direct	-1122 Jul 30 j 20:41	9° M 57'45		direct	-1116 Aug 25 j 16:44	5° ∡ ¹27'06	
conjunction	-1122 Nov 16 j 01:44	14°M08'02	0°11'04	conjunction	-1116 Dec 10 j 08:08	9° ∡ 128′28	0°-8'-41
minimum elong	-1122 Nov 16 j 01:44	14°M08'02	0°11'04	minimum elong	-1116 Dec 10 j 08:07	9° ∡ 128′28	0°08'42
behind sun begin	-1122 Nov 15 j 20:46	14° M 07'18		behind sun begin	-1116 Dec 10 j 02:26	9° ∡ 127'39	
behind sun end	-1122 Nov 16 j 06:42	14°M08'46		behind sun end	-1116 Dec 10 j 13:49	9° ∡ 129′18	

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1116 in astronomical counting style is the year 1117 BCE in historical counting style. -1116 Dec 11 j 07:40 9° ₹31'57 20.62325 AU max. Earth dist. conjunction -1107 Jan 11 i 07:02 11° ₹ 56'22 0°-31'-1 minimum elong -1115 Mar 28 j 22:34 13° ₹33'31 -1107 Jan 11 j 07:02 11°る56'22 0°31'03 retrograde -1115 Jun 14 i 13:28 11° ₹34'10 0°-11'-19 max. Earth dist. -1107 Jan 12 j 11:00 12°る00'24 21.01371 AU opposition min. Earth dist. -1115 Jun 13 j 14:39 11° ₹ 36'28 18.65489 AU -1107 May 01 j 00:54 15° ₹57'41 retrograde -1107 Jul 17 j 05:07 14°**정**01'18 19.02902 AU -1115 Aug 30 j 04:13 9°**х** 36'01 direct min. Earth dist. -1107 Jul 18 j 07:16 13°る58'42 0°-35'-31 opposition -1115 Dec 14 j 15:02 13° **x** 36'07 0°-11'-49 -1107 Oct 02 j 05:31 12°**⋜**02'21 conjunction direct -1115 Dec 14 j 15:02 13° ₹36'07 minimum elong 0°11'51 behind sun begin -1115 Dec 14 j 10:25 13° ₹35'28 conjunction -1106 Jan 15 j 11:36 15° ₹55'05 0°-33'-12 -1115 Dec 14 j 19:40 13° ₹36'47 -1106 Jan 15 j 11:36 15° ₹55'05 0°33'14 behind sun end minimum elong -1106 Jan 16 j 14:55 15° ₹59'01 21.04256 AU max. Earth dist. -1115 Dec 15 j 15:04 13° ₹39'40 20.68580 AU max. Earth dist. -1114 Apr 02 j 10:11 17°**尽** 40'34 -1106 May 05 j 09:53 19°**⋜**56'09 retrograde retrograde -1114 Jun 18 j 02:15 15° ₹ 43'49 18.71616 AU -1106 Jul 22 j 15:45 17° 궁57'07 0°-37'-50 min. Earth dist. opposition -1106 Jul 21 j 13:10 17°정59'46 19.05597 AU opposition -1114 Jun 19 j 02:54 15° ₹ 41'21 0°-14'-46 min. Earth dist. direct -1114 Sep 03 j 16:10 13°**尽**43'32 direct -1106 Oct 06 j 11:38 16°**⋜**00'51 conjunction -1114 Dec 18 j 21:46 17° ₹42'28 0°-14'-53 conjunction -1105 Jan 19 j 16:16 19°ਰ53'04 0°-35'-13 minimum elong -1114 Dec 18 j 21:46 17° ₹ 42'28 0°14'55 minimum elong -1105 Jan 19 j 16:16 19°₹53'04 behind sun begin -1114 Dec 18 j 19:04 17° ₹ 42'05 max. Earth dist. -1105 Jan 20 j 20:35 19°る57'08 21.06747 AU behind sun end -1114 Dec 19 i 00:28 17° ₹ 42'51 retrograde -1105 May 09 j 16:01 23°る53'55 max. Earth dist. -1114 Dec 19 j 23:30 17° **x** 46'15 20.74543 AU opposition -1105 Jul 26 j 23:37 21°る54'52 0°-39'-58 retrograde -1113 Apr 06 j 19:43 21° ₹ 46'20 min. Earth dist. -1105 Jul 25 j 21:29 21°る57'28 19.07902 AU opposition -1113 Jun 23 j 15:36 19° ₹747'14 0°-18'-8 direct -1105 Oct 10 j 17:30 19°₹58'41 min. Earth dist. -1113 Jun 22 i 15:04 19° ₹ 49'41 18.77418 AU direct -1113 Sep 08 j 02:24 17° ₹ 49'45 conjunction -1104 Jan 23 i 20:42 23°₹50'28 0°-37'-4 minimum elong -1104 Jan 23 j 20:42 23°る50'28 0°37'05 -1104 Jan 25 j 00:09 23°る54'23 21.08875 AU -1113 Dec 23 i 04:03 21° \(\brace \) 47'35 0°-17'-52 max. Earth dist. conjunction -1113 Dec 23 j 04:03 21° ₹ 47'35 retrograde -1104 May 13 j 00:27 27°る51'12 minimum elong 0°17'55 max. Earth dist. -1113 Dec 24 j 05:40 21° ₹ 51'20 20.80163 AU min. Earth dist. -1104 Jul 29 j 04:50 25°る54'46 19.09850 AU -1112 Apr 10 j 06:26 25° ₹ 50'56 -1104 Jul 30 j 07:14 25°る52'07 0°-41'-54 retrograde opposition -1112 Jun 26 j 01:54 23° ₹ 54'30 18.82843 AU -1104 Oct 13 j 22:08 23°**궁**56'01 min. Earth dist. direct -1112 Jun 27 j 03:45 23°**尽** 51'55 opposition 0°-21'-23 -1112 Sep 11 j 12:34 21° ₹ 54'44 -1103 Jan 27 j 01:11 27°₹47'28 0°-38'-44 direct conjunction -1103 Jan 27 j 01:11 27°₹47'28 0°38'46 minimum elong -1112 Dec 26 j 09:59 25° ₹751'32 0°-20'-45 -1103 Jan 28 j 05:30 27°る51'30 21.10624 AU max. Earth dist. conjunction -1112 Dec 26 j 09:58 25° ₹ 51'32 0°20'47 -1103 Mar 08 j 22:51 minimum elong 0°≈ -1112 Dec 27 j 12:56 25° ₹755'28 20.85359 AU -1103 May 17 j 07:12 1°≈48'09 max. Earth dist. retrograde -1103 Jul 30 j 01:00 30°R궁 retrograde -1111 Apr 14 j 15:14 29° ₹ 54'24 opposition -1111 Jul 01 j 15:25 27°**х** 55'27 0°-24'-30 opposition -1103 Aug 03 j 14:32 29°₹49'04 0°-43'-38 min. Earth dist. -1111 Jun 30 j 13:50 27° ₹ 58'00 18.87816 AU min. Earth dist. -1103 Aug 02 j 12:39 29°**궁**51'39 19.11405 AU direct -1111 Sep 15 j 21:54 25° ₹ 58'32 direct -1103 Oct 18 j 03:23 27°₹53'03 -1103 Dec 30 j 18:00 -1111 Dec 30 j 15:40 29° ₹ 54'22 0°-23'-32 conjunction minimum elong -1111 Dec 30 j 15:40 29° ₹ 54'22 0°23'33 conjunction -1102 Jan 31 j 05:49 1°≈44'15 0°-40'-13 max. Earth dist. -1111 Dec 31 j 18:06 29° ₹ 58'13 20.90097 AU -1102 Jan 31 j 05:49 1°≈44'15 0°40'14 minimum elong -1110 Jan 01 i 06:24 -1102 Feb 01 i 08:55 0°₹ max. Earth dist. 1°≈48'07 21.11989 AU -1110 Apr 19 i 01:23 -1102 May 21 j 15:37 retrograde 3°**ප**56'47 retrograde 5°≈44'56 -1110 Jul 04 i 23:51 2°る00'30 18.92314 AU min. Earth dist. opposition -1102 Aug 07 j 21:22 3°≈45'52 0°-45'-10 -1110 Jul 06 i 02:15 opposition 1°る57'52 0°-27'-30 min. Earth dist. -1102 Aug 06 i 19:43 3°≈48'25 19.12566 AU direct -1110 Sep 20 j 06:42 0°**ට**01'08 direct -1102 Oct 22 j 07:23 1°≈49'54 -1109 Jan 03 j 21:09 3°**ප**56'06 0°-26'-10 -1101 Feb 04 i 10:45 5°≈40'59 0°-41'-31 conjunction conjunction -1109 Jan 03 j 21:09 3°₹56'06 0°26'12 -1101 Feb 04 i 10:45 5°≈40'59 0°41'33 minimum elong minimum elong 4°る00'04 20.94333 AU -1109 Jan 05 i 00:36 -1101 Feb 05 j 14:17 max. Earth dist. max. Earth dist. 5°≈44'54 21.12926 AU -1109 Apr 23 j 08:58 7°る58'05 retrograde retrograde -1101 May 25 j 22:41 9°**≈**41'43 -1109 Jul 09 j 10:38 7°≈45'08 19.13273 AU min. Earth dist. 6°る01'46 18.96300 AU min. Earth dist. -1101 Aug 11 j 03:15 opposition -1109 Jul 10 j 12:33 5°**る**59'11 0°-30'-20 opposition -1101 Aug 12 j 04:04 7°**≈**42'39 0°-46'-30 direct -1109 Sep 24 j 14:56 4°る02'37 direct -1101 Oct 26 j 11:46 5°≈46'46 -1108 Jan 08 j 02:08 7°る56'44 0°-28'-40 -1100 Feb 08 j 15:41 9°≈37'47 0°-42'-37 conjunction conjunction -1108 Jan 08 j 02:08 7°る56'44 0°28'42 -1100 Feb 08 j 15:41 minimum elong minimum elong 9°**≈**37'47 0°42'39 -1108 Jan 09 j 04:57 max. Earth dist. 8°る00'37 20.98082 AU max. Earth dist. -1100 Feb 09 j 17:38 9°≈41'28 21.13407 AU retrograde -1108 Apr 26 j 18:29 11°る58'22 retrograde -1100 May 29 j 07:32 13°≈38'40 opposition -1108 Jul 13 j 22:11 9°**る**59'25 0°-33'-1 min. Earth dist. -1100 Aug 14 j 10:28 11°≈42'01 19.13509 AU min. Earth dist. -1108 Jul 12 j 19:40 10°る02'04 18.99820 AU opposition -1100 Aug 15 j 10:38 11°**≈**39'36 0°-47'-36 direct -1108 Sep 27 j 22:33 8°る02'58 -1100 Oct 29 j 16:05 9°≈43'43 direct

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 21 Attention, astronomical year style is used: The year -1099 in astronomical counting style is the year 1100 BCE in historical counting style.

Attention, astronom	nical year style is used: T	he year -1099	in astronomical cou	inting style is the year	1100 BCE in historical	counting style	
conjunction	-1099 Feb 11 j 21:12	13° ≈ 34'48	0°-43'-31	min. Earth dist.	-1092 Sep 15 j 22:28	13° ¥ 28'47	18.95555 AU
minimum elong	-1099 Feb 11 j 21:12	13° ≈ 34'48	0°43'33	direct	-1092 Nov 30 j 04:28	11°) 30′16	
max. Earth dist.	-1099 Feb 12 j 23:13	13° ≈ 38'30	21.13378 AU				
	-1099 Mar 09 j 09:03			conjunction	-1091 Mar 16 j 07:13		
retrograde	-1099 Jun 02 j 15:00			minimum elong	-1091 Mar 16 j 07:13		
opposition	-1099 Aug 19 j 16:59			max. Earth dist.	-1091 Mar 16 j 21:58		20.93449 AU
min. Earth dist.	-1099 Aug 18 j 18:02		19.13207 AU	retrograde	-1091 Jul 05 j 13:06		
	-1099 Sep 04 j 05:12			opposition	-1091 Sep 20 j 17:53		
direct	-1099 Nov 02 j 19:49			min. Earth dist.	-1091 Sep 20 j 05:49		18.91305 AU
	-1099 Dec 29 j 17:14	15° ≈		direct	-1091 Dec 04 j 10:08	15° ★ 31'13	
conjunction	-1098 Feb 16 j 03:01	17°≈32'06	0°-44'-13	conjunction	-1090 Mar 20 j 16:45	19° ¥ 26'33	0°-42'-1
minimum elong	-1098 Feb 16 j 03:01			minimum elong	-1090 Mar 20 j 16:45		
max. Earth dist.	-1098 Feb 17 j 02:53			max. Earth dist.	-1090 Mar 21 j 04:48		
retrograde	-1098 Jun 07 j 00:07			retrograde	-1090 Jul 09 j 23:39		
opposition	-1098 Aug 23 j 23:18		0°-49'-8	opposition	-1090 Sep 25 j 00:24		0°-45'-47
min. Earth dist.	-1098 Aug 23 j 01:33			min. Earth dist.	-1090 Sep 24 j 13:59		
direct	-1098 Nov 07 j 00:33	17° ≈ 38'17		direct	-1090 Dec 08 j 15:20	19°) 33′15	
conjunction	-1097 Feb 20 j 09:20			conjunction	-1089 Mar 25 j 03:00		
minimum elong	-1097 Feb 20 j 09:20			minimum elong	-1089 Mar 25 j 03:00		
max. Earth dist.	-1097 Feb 21 j 08:46		21.11616 AU	max. Earth dist.	-1089 Mar 25 j 14:31		20.84368 AU
retrograde	-1097 Jun 11 j 07:57			retrograde	-1089 Jul 14 j 09:48		
min. Earth dist.	-1097 Aug 27 j 09:05			opposition	-1089 Sep 29 j 07:05		
opposition	-1097 Aug 28 j 05:25		0°-49'-34	min. Earth dist.	-1089 Sep 28 j 21:51		18.81928 AU
direct	-1097 Nov 11 j 04:44	21° ≈ 35'58		direct	-1089 Dec 12 j 21:08	23° X 36'34	
conjunction	-1096 Feb 24 j 15:52	25°≈27'41	0°-44'-59	conjunction	-1088 Mar 28 j 13:55	27° ₩ 33'53	0°-39'-19
minimum elong	-1096 Feb 24 j 15:52			minimum elong	-1088 Mar 28 j 13:55		
max. Earth dist.	-1096 Feb 25 j 12:53			max. Earth dist.	-1088 Mar 28 j 22:36		
retrograde	-1096 Jun 14 j 16:45				-1088 May 12 j 22:13		
opposition	-1096 Aug 31 j 11:35		0°-49'-44	retrograde	-1088 Jul 17 j 21:42	1° Y '39'59	
min. Earth dist.	-1096 Aug 30 j 16:39			-	-1088 Sep 24 j 06:50	30° ₹	
direct	-1096 Nov 14 j 09:19	25° ≈ 33'55		opposition	-1088 Oct 02 j 14:13	29°) 39′27	0°-42'-35
				min. Earth dist.	-1088 Oct 02 j 06:54	29°) 40′12	18.76832 AU
conjunction	-1095 Feb 27 j 22:50	29° ≈ 26′00	0°-45'-2	direct	-1088 Dec 16 j 03:29	27°) 41′18	
minimum elong	-1095 Feb 27 j 22:50	29° ≈ 26′00	0°45'03		-1087 Mar 03 j 07:38	0° Y	
max. Earth dist.	-1095 Feb 28 j 19:24		21.07479 AU				
	-1095 Mar 09 j 22:35	0° ∀		conjunction	-1087 Apr 02 j 01:49		0°-37'-40
retrograde	-1095 Jun 19 j 01:04	3° ¥ 28'11		minimum elong	-1087 Apr 02 j 01:49	1° Y 39'45	0°37'40
opposition	-1095 Sep 04 j 17:39	1° ∺ 28'39		max. Earth dist.	-1087 Apr 02 j 09:46		20.74171 AU
min. Earth dist.	-1095 Sep 04 j 00:07		19.06129 AU	retrograde	-1087 Jul 22 j 08:52	5° Y 46'37	
	-1095 Oct 16 j 01:49	30°R≈		opposition	-1087 Oct 06 j 21:42	3° ℃ 46′01	0°-40'-39
direct	-1095 Nov 18 j 14:25	29° ≈ 32'13		min. Earth dist.	-1087 Oct 06 j 15:46		18.71433 AU
	-1095 Dec 21 j 13:03	0° ∺		direct	-1087 Dec 20 j 10:17	1° Y 47'37	
conjunction	-1094 Mar 04 j 06:12	3° ¥ 24'45	0°-44'-52	conjunction	-1086 Apr 06 j 14:31	5° Ƴ 47'16	0°-35'-48
minimum elong	-1094 Mar 04 j 06:12	3°) €24'45	0°44'53	minimum elong	-1086 Apr 06 j 14:31	5° Ƴ 47'16	0°35'48
max. Earth dist.	-1094 Mar 05 j 00:16		21.04603 AU	max. Earth dist.	-1086 Apr 06 j 19:12		20.68626 AU
retrograde	-1094 Jun 23 j 09:43	7° ∺ 27'19		retrograde	-1086 Jul 26 j 21:27	9° Ƴ 54'57	
opposition	-1094 Sep 08 j 23:32	5°) €27'36	0°-49'-22	opposition	-1086 Oct 11 j 05:37	7° Ƴ 54'15	0°-38'-29
min. Earth dist.	-1094 Sep 08 j 07:33	5° ¥ 29'14	19.03016 AU	min. Earth dist.	-1086 Oct 11 j 02:04	7° Y ′54'37	18.65727 AU
direct	-1094 Nov 22 j 18:32	3° ∺ 30′56		direct	-1086 Dec 24 j 18:00	5° Y 55'34	
	100234 00:1405	701/24/02	09 44! 29		1005 4 11:04:5	000055125	00 221 44
conjunction	-1093 Mar 08 j 14:07			conjunction	-1085 Apr 11 j 04:15	9° Y 56'31	0°-33'-44
minimum elong	-1093 Mar 08 j 14:07	7° ¥ 24'02		minimum elong	-1085 Apr 11 j 04:16	9° Y 56'31	0°33'44
max. Earth dist.	-1093 Mar 09 j 07:45		21.01264 AU	max. Earth dist.	-1085 Apr 11 j 07:50	9°°γ′5′/02 14° Υ '05'00	20.62749 AU
retrograde	-1093 Jun 27 j 18:26		0°-48'-50	retrograde	-1085 Jul 31 j 09:55	14° γ '05'00 12° γ '04'12	0° 36' 6
opposition min. Earth dist.	-1093 Sep 13 j 05:33 -1093 Sep 12 j 14:48		18.99465 AU	opposition min. Earth dist.	-1085 Oct 15 j 14:05 -1085 Oct 15 j 12:01		18.59673 AU
direct	-1093 Sep 12 j 14:48 -1093 Nov 27 j 00:07	9° X 28′39 7° X 30′15	10.77 1 03 AU	direct	-1085 Oct 13 j 12:01 -1085 Dec 29 j 02:38	12° 1 04 25 10° Y 05'12	10.37013 AU
direct	-10/3 110V 2/ J 00.0/	, N 30 13		direct	1005 Dec 29 J 02.38	10 1 03 12	
conjunction	-1092 Mar 11 j 22:13	11°) 23′58	0°-43'-52	conjunction	-1084 Apr 14 j 18:34	14° Ƴ 07'28	0°-31'-28
minimum elong	-1092 Mar 11 j 22:13			minimum elong	-1084 Apr 14 j 18:34	14° Y ′07′28	0°31'29
max. Earth dist.	-1092 Mar 12 j 13:25			max. Earth dist.	-1084 Apr 14 j 18:38		20.56531 AU
retrograde	-1092 Jul 01 j 03:42			retrograde	-1084 Aug 03 j 22:46	18° Ƴ 16'48	
opposition	-1092 Sep 16 j 11:43		0°-48'-3	opposition	-1084 Oct 18 j 23:11	16° Ƴ 15'51	0°-33'-30

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 22 Attention, astronomical year style is used: The year -1084 in astronomical counting style is the year 1085 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	ne year -1084	in astronomical cou	nting style is the year	1085 BCE in historical of	counting style	
min. Earth dist.	-1084 Oct 18 j 23:43		18.53285 AU		-1076 Mar 10 j 08:03	15° 8	
direct	-1083 Jan 01 j 11:43	14° Ƴ 16′29					
				conjunction	-1076 May 20 j 20:44		
conjunction	-1083 Apr 19 j 10:07			minimum elong	-1076 May 20 j 20:45		0°07/50
minimum elong	-1083 Apr 19 j 10:07		0°29'01	behind sun begin	-1076 May 20 j 14:40		
max. Earth dist.	-1083 Apr 19 j 08:53	18°°γ′19′56 22° Υ 30′16	20.49979 AU	behind sun end	-1076 May 21 j 02:49		20.00146.411
retrograde	-1083 Aug 08 j 12:37		0°-30'-42	max. Earth dist.	-1076 May 20 j 04:13		20.00146 AU
opposition min. Earth dist.	-1083 Oct 23 j 08:34 -1083 Oct 23 j 10:35			retrograde opposition	-1076 Sep 08 j 03:31 -1076 Nov 21 j 19:33		00 6! 45
direct	-1083 Oct 25 j 10.35 -1082 Jan 05 j 22:26		16.403/1 AU	min. Earth dist.	-1076 Nov 21 j 19:33 -1076 Nov 22 j 09:55		
direct	-1062 Jan 03 J 22.20	10 1 29 23		direct	-1076 Nov 22 j 09:33 -1075 Feb 04 j 16:23		17.90087 AU
conjunction	-1082 Apr 24 j 02:20	22° Y 34'25	0°-26'-24	direct	-10751 co 04 j 10.25	10 04/0/	
minimum elong	-1082 Apr 24 j 02:20		0°26'25	conjunction	-1075 May 25 j 18:53	23° 8 03'02	0°-4'-25
max. Earth dist.	-1082 Apr 23 j 21:31			minimum elong	-1075 May 25 j 18:54		
retrograde	-1082 Aug 13 j 01:55			behind sun begin	-1075 May 25 j 12:14		
opposition	-1082 Oct 27 j 18:40		0°-27'-43	behind sun end	-1075 May 26 j 01:33		
min. Earth dist.	-1082 Oct 27 j 23:21		18.39612 AU	max. Earth dist.	-1075 May 25 j 01:19		19.93296 AU
direct	-1081 Jan 10 j 08:40			retrograde	-1075 Sep 12 j 23:32	27° 8 19'59	
				opposition	-1075 Nov 26 j 10:06	25° 8 17'40	0°-2'-54
conjunction	-1081 Apr 28 j 19:20	26° Y ′50′23	0°-23'-37	min. Earth dist.	-1075 Nov 27 j 00:53	25° 8 16'04	17.89931 AU
minimum elong	-1081 Apr 28 j 19:20	26° Y ′50′23	0°23'38	direct	-1074 Feb 09 j 09:33	23° 8 14'26	
max. Earth dist.	-1081 Apr 28 j 13:26	26° Ƴ 49'31	20.36075 AU				
	-1081 Jun 28 j 12:23	9° 8		conjunction	-1074 May 30 j 17:50		
retrograde	-1081 Aug 17 j 17:04	1° 8 02'11		minimum elong	-1074 May 30 j 17:51		0°00'54
	-1081 Oct 07 j 20:44	30° ŖƳ		behind sun begin	-1074 May 30 j 11:04		
opposition	-1081 Nov 01 j 05:11	29° Y ′00'42		behind sun end	-1074 May 31 j 00:38		
min. Earth dist.	-1081 Nov 01 j 10:59		18.32465 AU	max. Earth dist.	-1074 May 29 j 22:10		19.86636 AU
direct	-1080 Jan 14 j 21:11	27° Y ′00'03			-1074 Jul 13 j 03:10	0°II	
	-1080 Apr 13 j 01:03	0° 8		asc. node	-1074 Aug 29 j 20:38	1° Ⅱ 40'10	
				retrograde	-1074 Sep 17 j 18:07	1° Ⅱ 49'49	
conjunction	-1080 May 02 j 13:06	_			-1074 Nov 26 j 05:59	30°R8	0000150
minimum elong	-1080 May 02 j 13:06		0°20'42	opposition	-1074 Dec 01 j 01:46	29° 8 47'29	
max. Earth dist.	-1080 May 02 j 03:57		20.28874 AU	min. Earth dist.	-1074 Dec 01 j 18:55		17.83381 AU
retrograde	-1080 Aug 21 j 07:21	5° 8 20'40	00 211 15	direct	-1073 Feb 14 j 01:03		
opposition min. Earth dist.	-1080 Nov 04 j 16:18 -1080 Nov 05 j 00:40	3° 8 18'59	18.25230 AU		-1073 Apr 30 j 10:53	$\Pi^{\circ}0$	
direct	-1079 Jan 18 j 08:30	1° 8 17'50	16.23230 AU	conjunction	-1073 Jun 04 j 17:30	2° Ⅲ 03'08	0°02'44
uncet	-10/7 Jan 10 J 00.50	1 017 30		minimum elong	-1073 Jun 04 j 17:30	2° I 103'08	
conjunction	-1079 May 07 j 07:54	5° 8 27'20	0°-17'-38	behind sun begin	-1073 Jun 04 j 17:31	2° I 102'09	0 02 43
minimum elong	-1079 May 07 j 07:54		0°17'39	behind sun end	-1073 Jun 05 j 00:17	2° I 04'08	
max. Earth dist.	-1079 May 06 j 21:43		20.21615 AU	max. Earth dist.	-1073 Jun 03 j 20:34		19.80187 AU
retrograde	-1079 Aug 26 j 00:06	9° 8 40'49		retrograde	-1073 Sep 22 j 15:57	6° Ⅱ 21'49	
opposition	-1079 Nov 09 j 04:00	7° 8 38'58	0°-17'-47	opposition	-1073 Dec 05 j 18:07	4° Ⅱ 19'27	0°04'55
min. Earth dist.	-1079 Nov 09 j 13:11	7° 8 37'59	18.17961 AU	min. Earth dist.	-1073 Dec 06 j 11:41	4° Ⅱ 17'33	17.77027 AU
direct	-1078 Jan 22 j 22:22	5° 8 37'22		direct	-1072 Feb 18 j 20:24	2° Ⅱ 15'34	
conjunction	-1078 May 12 j 03:20	9° 8 48'25	0°-14'-28	conjunction	-1072 Jun 08 j 18:12	6° Ⅱ 36′25	0°06'15
minimum elong	-1078 May 12 j 03:20	9° 8 48'25	0°14'27	minimum elong	-1072 Jun 08 j 18:12	6° Ⅱ 36′25	0°06'16
behind sun begin	-1078 May 12 j 00:34	9° 8 48'01		behind sun begin	-1072 Jun 08 j 11:47	6° Ⅱ 35'28	
behind sun end	-1078 May 12 j 06:06	9° 8 48'49		behind sun end	-1072 Jun 09 j 00:37	6° Ⅱ 37'22	
max. Earth dist.	-1078 May 11 j 14:13		20.14355 AU	max. Earth dist.	-1072 Jun 07 j 19:31		19.73913 AU
retrograde	-1078 Aug 30 j 15:54	14° 8 02'46		retrograde	-1072 Sep 26 j 11:43	10° I 55'53	
opposition	-1078 Nov 13 j 16:27	12° 8 00'44	0°-14'-12	opposition	-1072 Dec 09 j 11:25	8° Ⅱ 53'31	
min. Earth dist.	-1078 Nov 14 j 04:02		18.10742 AU	min. Earth dist.	-1072 Dec 10 j 07:24		17.70855 AU
direct	-1077 Jan 27 j 11:06	9° 8 58'40		direct	-1071 Feb 22 j 13:44	6° Ⅱ 49'19	
conjunction	-1077 May 16 j 23:42	140 11120	00 11! 11	conjunction	-1071 Jun 13 j 19:41	1101111147	0°09'46
				-	-		
minimum elong behind sun begin	-1077 May 16 j 23:42 -1077 May 16 j 18:46		0°11'12	minimum elong behind sun begin	-1071 Jun 13 j 19:41 -1071 Jun 13 j 14:11		0°09'47
behind sun eedli	-1077 May 10 j 18.46 -1077 May 17 j 04:38			behind sun end	-1071 Jun 14 j 01:11		
max. Earth dist.	-1077 May 17 j 04.38		20 07184 AU	max. Earth dist.	-1071 Jun 12 j 19:10		19 67832 ATT
max. Darui dist.	-1077 May 10 j 09:40	14 8 09 13	20.0/10 1 AU	retrograde	-1071 Oct 01 j 10:40		17.07032 AU
retrograde	-1077 Sep 04 j 10:09			opposition	-1071 Dec 14 j 05:32		0°12'45
opposition	-1077 Nov 18 j 05:31		0°-10'-31	min. Earth dist.	-1071 Dec 15 j 01:56		
min. Earth dist.	-1077 Nov 18 j 17:35			direct	-1070 Feb 27 j 11:21		
	-1077 Dec 24 j 07:30				· J	- · · -	
direct	-1076 Feb 01 j 02:16			conjunction	-1070 Jun 18 j 21:46	15° Ⅱ 48'59	0°13'15
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Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1070 in astronomical counting style is the year 1071 BCE in historical counting style. -1070 Jun 18 j 21:46 15°**Д**48'59 0°13'16 conjunction -1062 Jul 28 i 03:30 23°536'36 0°36'37 minimum elong -1070 Jun 18 j 17:59 15°**Ⅲ**48'25 -1062 Jul 28 j 03:30 23°536'36 behind sun begin minimum elong 0°36'37 -1070 Jun 19 j 01:34 15°**Ⅲ**49'33 -1062 Nov 13 j 04:27 28°500'37 behind sun end retrograde -1061 Jan 25 j 10:15 25°\$58'04 0°41'59 -1070 Jun 17 j 20:07 15° **II**45'03 19.61930 AU max. Earth dist. opposition -1070 Oct 06 j 07:14 20°Д09'53 -1061 Jan 26 j 10:28 25°\$55'24 17.27669 AU retrograde min. Earth dist. -1070 Dec 19 j 00:38 18°**Д**07'28 0°16'37 -1061 Apr 11 j 15:27 23°551'17 opposition direct -1070 Dec 19 j 23:07 18°**I**05'00 17.59087 AU max. Earth dist. -1061 Aug 01 j 03:19 28°519'47 19.26910 AU min. Earth dist. direct -1069 Mar 04 j 06:59 16°**Ⅲ**02'36 max. Earth dist. -1069 Jun 22 j 20:50 20°**Ⅲ**23'44 19.56277 AU conjunction -1061 Aug 02 j 07:42 28°\$24'16 0°38'38 minimum elong -1061 Aug 02 j 07:42 28°\$24'16 0°38'39 conjunction -1069 Jun 24 j 00:22 20°**Ⅲ**27'58 0°16'40 -1061 Aug 28 j 03:21 0° Ω -1069 Jun 24 j 00:22 20°**Ⅲ**27'58 -1061 Nov 18 j 04:41 minimum elong 0°16'40 retrograde 2°**Ω**48'21 -1069 Oct 11 j 06:38 24°**II**49'30 -1060 Jan 30 j 11:09 retrograde opposition 0°**Ω**45'54 0°44'06 opposition -1069 Dec 23 j 20:17 22°**Ⅲ**47'01 0°20'23 min. Earth dist. -1060 Jan 31 j 11:19 0°**Ω**43'16 17.26411 AU min. Earth dist. -1069 Dec 24 j 19:02 22° **II** 44'32 17.53576 AU -1060 Feb 17 j 08:49 30°Rூ direct -1068 Mar 08 j 06:55 20°**Ⅱ**41'49 direct -1060 Apr 15 j 17:55 28°939'07 max. Earth dist. -1068 Jun 26 j 23:43 25°**I**I04'14 19.50907 AU -1060 Jun 11 j 05:39 $0^{\circ}\Omega$ max. Earth dist. -1060 Aug 05 j 09:03 3°Ω08'15 19.25967 AU conjunction -1068 Jun 28 j 03:35 25°**Ⅲ**08'32 0°19'59 minimum elong -1068 Jun 28 j 03:35 25°**Ⅲ**08'32 conjunction -1060 Aug 06 j 11:57 3°Ω12'30 0°40'23 retrograde -1068 Oct 15 j 03:46 29° **II** 30'38 minimum elong -1060 Aug 06 j 11:57 3°**Ω**12'30 0°40'25 opposition -1068 Dec 27 j 16:53 27° **II** 28'06 0°24'02 retrograde -1060 Nov 22 j 06:43 7°**Ω**36'36 min. Earth dist. -1068 Dec 28 i 17:15 27°**II**25'26 17.48377 AU opposition -1059 Feb 03 i 12:40 5° **Ω**34'17 0°45'55 direct -1067 Mar 13 i 04:59 25°**Ⅱ**22'34 min. Earth dist. -1059 Feb 04 i 11:40 5°**Ω**31'46 17.25760 AU max. Earth dist. -1067 Jul 02 j 01:28 29°**I**I45'57 19.45895 AU direct -1059 Apr 20 j 22:10 3°**Ω**27'33 -1067 Jul 03 j 07:04 29°**I**I50'32 0°23'11 -1059 Aug 11 j 15:55 8°Ω01'08 0°41'52 conjunction conjunction -1067 Jul 03 j 07:04 29°**I**I50'32 0°23'12 -1059 Aug 11 j 15:55 8°Ω01'08 0°41'53 minimum elong minimum elong -1067 Jul 05 j 20:11 -1059 Aug 10 j 13:26 7°**Ω**56'57 19.25608 AU 0ംഉ max. Earth dist. -1067 Oct 20 j 03:25 -1059 Nov 27 j 06:38 12°**Ω**25'11 4°9513'07 retrograde retrograde -1058 Feb 08 j 14:47 $10^{\circ}\Omega$ 22'59 $0^{\circ}47'24$ -1066 Jan 01 j 14:01 2°9510'32 0°27'32 opposition opposition -1066 Jan 02 j 14:29 -1058 Feb 09 j 13:51 10°**Ω**20'28 17.25696 AU min. Earth dist. 2°507'51 17.43573 AU min. Earth dist. -1066 Mar 18 j 06:44 -1058 Apr 26 j 01:45 8°**Ω**16'19 0°9604'41 direct direct -1066 Jul 07 j 05:58 4°529'17 19.41302 AU max. Earth dist. -1058 Aug 16 j 19:41 $12^{\circ}\Omega$ 49'59 $0^{\circ}43'04$ conjunction -1066 Jul 08 j 10:59 4°533'47 0°26'15 -1058 Aug 16 j 19:41 $12^{\circ}\Omega$ 49'59 $0^{\circ}43'05$ conjunction minimum elong -1066 Jul 08 j 10:59 -1058 Aug 15 j 18:24 12° Ω 45'58 19.25821 AU minimum elong 4°933'47 0°26'16 max. Earth dist. retrograde -1066 Oct 25 j 01:57 8°956'47 -1058 Sep 21 j 10:40 15°**Ω** opposition -1065 Jan 06 j 12:04 6°954'09 0°30'52 retrograde -1058 Dec 02 j 08:33 $17^{\circ}\Omega$ 13'52 min. Earth dist. -1065 Jan 07 j 13:21 6°951'23 17.39223 AU opposition -1057 Feb 13 j 17:08 15° **Ω**11'47 0°48'34 direct -1065 Mar 23 j 07:02 4°9548'02 min. Earth dist. -1057 Feb 14 j 14:32 15°**Ω**09'28 17.26167 AU max. Earth dist. -1065 Jul 12 j 08:28 9°513'25 19.37210 AU -1057 Feb 18 j 05:46 15°R**Ω** -1057 May 01 j 07:35 13°**Ω**05'14 direct -1065 Jul 13 j 14:46 9°518'08 0°29'09 -1057 Jul 08 j 10:46 15°**Ω** conjunction -1065 Jul 13 j 14:46 9°**©**18'08 minimum elong 0°29'10 -1065 Oct 30 i 01:54 13°541'30 -1057 Aug 21 j 23:02 $17^{\circ}\Omega$ 38'46 $0^{\circ}43'57$ retrograde conjunction -1064 Jan 11 j 10:38 11°\$38'50 0°34'00 -1057 Aug 21 j 23:02 $17^{\circ}\Omega$ 38'46 $0^{\circ}43'58$ opposition minimum elong -1057 Aug 20 j 22:51 $17^{\circ}\Omega$ 34'56 19.26547 AU min. Earth dist. -1064 Jan 12 j 11:47 11°536'05 17.35412 AU max. Earth dist. -1064 Mar 27 i 09:09 -1057 Dec 07 j 08:01 $22^{\circ}\Omega$ 02'25 direct 9°**©**32'27 retrograde opposition -1056 Feb 18 i 19:56 $20^{\circ}\Omega 00'27$ $0^{\circ}49'23$ -1064 Jul 17 i 19:03 14°503'28 0°31'51 min. Earth dist. -1056 Feb 19 j 17:24 19°Ω58'07 17.27146 AU conjunction -1064 Jul 17 j 19:03 14°503'28 0°31'51 direct -1056 May 05 j 11:41 $17^{\circ}\Omega$ 53'59 minimum elong max. Earth dist. -1064 Jul 16 j 13:59 13°558'55 19.33676 AU max. Earth dist. -1056 Aug 25 j 02:40 22°**Q**23'34 19.27774 AU -1064 Nov 03 j 02:15 18°\$27'05 retrograde -1063 Jan 15 j 09:49 16°524'26 0°36'55 opposition conjunction -1056 Aug 26 j 02:00 22° Ω 27'16 0°44'32 min. Earth dist. -1063 Jan 16 j 11:02 16°521'40 17.32179 AU minimum elong -1056 Aug 26 j 02:00 22° Ω 27'16 0°44'32 direct -1063 Apr 01 j 10:45 14°517'51 retrograde -1056 Dec 11 j 09:32 26°**Ω**50'35 -1055 Feb 22 j 22:41 24° Ω 48'43 0°49'52 opposition -1063 Jul 22 j 23:17 18°549'39 0°34'21 -1055 Feb 23 j 18:10 24° **Ω**46'37 17.28603 AU conjunction min. Earth dist. -1063 Jul 22 j 23:16 18°549'39 -1055 May 10 j 18:08 22° **Ω**42'23 minimum elong 0°34'22 direct -1063 Jul 21 j 17:24 18°544'58 19.30758 AU -1055 Aug 30 j 07:01 27° Ω11'49 19.29468 AU max. Earth dist. max. Earth dist. retrograde -1063 Nov 08 j 02:39 23°513'30 opposition -1062 Jan 20 j 09:45 21°510'52 0°39'35 conjunction -1055 Aug 31 j 04:30 27°Ω15'13 0°44'48 min. Earth dist. -1062 Jan 21 j 10:42 21°508'08 17.29597 AU minimum elong -1055 Aug 31 j 04:30 27°Ω15'13 0°44'48 direct -1062 Apr 06 j 12:44 19°504'09 -1055 Oct 16 j 17:33 0° M max. Earth dist. -1062 Jul 26 j 23:18 23°532'10 19.28503 AU -1055 Dec 16 j 08:38 1° mp 38'09 retrograde

-1054 Feb 18 j 21:12 30°RΩ

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1054 in astronomical counting style is the year 1055 BCE in historical counting style. -1054 Feb 28 j 01:50 29° Ω 36'22 0°49'58 min. Earth dist. -1046 Apr 07 j 22:27 7°**2**13'27 17.63932 AU opposition min. Earth dist. -1054 Feb 28 j 21:07 29° Ω 34'17 17.30537 AU direct -1046 Jun 24 j 00:22 5°**₽**09'53 -1054 May 15 j 22:24 $27^{\circ}\Omega 30'10$ direct -1046 Oct 12 j 13:49 -1054 Aug 02 j 21:16 9°**₽**33'09 0°m conjunction 0°34'01 -1054 Sep 04 j 09:24 -1046 Oct 12 j 13:49 1° m 59'08 19.31649 AU 9°**₽**33'09 0°34'01 max. Earth dist. minimum elong -1046 Oct 12 j 10:37 max. Earth dist. 9°**♀**32'39 19.67015 AU -1054 Sep 05 j 06:03 -1045 Jan 27 j 16:45 13°**♀**50'03 conjunction 2° Mp 02'24 0°44'45 retrograde minimum elong -1054 Sep 05 j 06:03 -1045 Apr 12 j 19:39 2° Mp 02'24 0°44'44 opposition 11°**≏**49'17 0°36'32 -1054 Dec 21 j 09:26 retrograde 6° Mp 24'52 min. Earth dist. -1045 Apr 12 j 21:03 11°**2**49'08 17.70158 AU 4°**™**23'09 opposition -1053 Mar 05 j 04:44 0°49'44 direct -1045 Jun 29 j 01:11 9°**£**45'47 min. Earth dist. -1053 Mar 05 j 21:39 4° № 21'20 17.32947 AU -1045 Oct 17 j 07:59 14°**♀**07'36 0°31'35 direct -1053 May 21 j 04:30 2° m 17'06 conjunction -1045 Oct 17 j 07:59 14°**♀**07'36 0°31'35 minimum elong conjunction -1053 Sep 10 j 07:09 6° m 48'36 0°44'23 max. Earth dist. -1045 Oct 17 j 07:44 14° **2**07'33 19.73379 AU minimum elong -1053 Sep 10 j 07:09 6° Mp 48'36 0°44'23 retrograde -1044 Feb 01 j 11:51 18°**2**23'39 max. Earth dist. -1053 Sep 09 j 13:04 6° Mp 45'44 19.34300 AU opposition -1044 Apr 16 j 19:33 16°**2**23'03 retrograde -1053 Dec 26 j 07:44 11° Mp 10'30 min. Earth dist. -1044 Apr 16 j 18:41 16°**£**23'09 17.76627 AU opposition -1052 Mar 09 j 07:32 9° mp 08'51 0°49'09 direct -1044 Jul 03 j 02:01 14°**2**20'01 min. Earth dist. -1052 Mar 09 j 23:55 9°Mp07'06 17.35837 AU direct -1052 May 25 j 07:56 7° m 02'59 conjunction -1044 Oct 21 j 01:13 18°**£**40'17 0°28'59 minimum elong -1044 Oct 21 j 01:13 18°**£**40'17 0°28'58 conjunction -1052 Sep 14 i 07:17 11° mp 33'36 0°43'43 max. Earth dist. -1044 Oct 21 j 02:25 18° **2**40'28 19.79953 AU minimum elong -1052 Sep 14 i 07:17 11° mp 33'36 0°43'42 retrograde -1043 Feb 05 i 06:05 22° **2**55'30 max. Earth dist. -1052 Sep 13 i 14:04 11° m 30'53 19.37448 AU opposition -1043 Apr 21 j 19:10 20° **2**55'03 0°30'42 -1052 Dec 30 j 08:00 15° m 54'54 retrograde min. Earth dist. -1043 Apr 21 j 16:48 20° **2**55'18 17.83292 AU opposition -1051 Mar 14 j 10:11 13° mp 53'18 0°48'14 direct -1043 Jul 08 j 00:36 18° **⊆**52'26 min. Earth dist. -1051 Mar 14 j 23:57 13° m 51'50 17.39233 AU -1051 May 30 j 12:50 11° mp 47'38 -1043 Oct 25 j 17:32 23°**♀**11'07 0°26'12 direct conjunction -1043 Oct 25 j 17:32 23°**≙**11'07 0°26'12 minimum elong -1051 Sep 19 j 06:35 16° mp 17'15 0°42'45 -1043 Oct 25 j 21:19 23° **2**11'42 19.86684 AU conjunction max. Earth dist. -1051 Sep 19 j 06:35 16° mp 17'15 0°42'45 -1042 Feb 10 j 00:31 27°**£**25'28 retrograde minimum elong -1042 Apr 26 j 18:03 25°**♀**25'09 0°27'31 -1051 Sep 18 j 16:38 16° Mp 15'03 19.41103 AU max. Earth dist. opposition -1042 Apr 26 j 13:10 25°**£**25'40 17.90061 AU -1050 Jan 04 j 05:44 20° Mp 37'53 min. Earth dist. retrograde -1050 Mar 19 j 12:46 18° Mp 36'22 0°47'00 -1042 Jul 13 j 00:10 23°**♀**22'57 opposition direct -1050 Mar 20 j 01:15 18° m 35'03 17.43147 AU min. Earth dist. -1042 Oct 30 j 09:03 27°**♀**40'01 0°23'16 -1050 Jun 04 j 15:12 16° m 30'57 direct conjunction -1042 Oct 30 j 09:03 27°**Ω**40'01 0°23'15 minimum elong conjunction -1050 Sep 24 j 04:55 20° m 59'28 0°41'30 max. Earth dist. -1042 Oct 30 j 14:19 27° • 40'49 19.93485 AU minimum elong -1050 Sep 24 j 04:55 20° m 59'28 0°41'31 -1042 Dec 09 j 08:40 0° M max. Earth dist. -1050 Sep 23 j 16:10 20° m 57'27 19.45296 AU retrograde -1041 Feb 14 j 17:05 1°M53'28 retrograde -1049 Jan 09 j 05:13 25° Mp 19'24 -1041 Apr 28 j 22:53 30°R € -1049 Mar 24 j 14:47 23° m 17'59 0°45'27 opposition -1041 May 01 j 16:12 29°**♀**53'17 0°24'11 opposition min. Earth dist. -1049 Mar 25 j 00:34 23° m 16'56 17.47613 AU min. Earth dist. -1041 May 01 j 10:17 29°**♀**53'53 17.96891 AU direct -1049 Jun 09 j 18:39 21° Mp 12'51 direct -1041 Jul 17 j 20:23 27°**♀**51'27 -1041 Sep 28 j 23:49 -1049 Sep 29 i 02:33 25° mp 40'10 0°40'00 conjunction -1049 Sep 29 i 02:33 25° mp 40'10 0°39'59 -1041 Nov 03 j 23:44 2°M06'53 0°20'14 minimum elong conjunction -1049 Sep 28 j 17:14 25° m 38'43 19.50029 AU -1041 Nov 03 i 23:45 max. Earth dist. minimum elong 2°ML06'53 0°20'14 -1048 Jan 14 i 02:19 29° m 59'23 retrograde max. Earth dist. -1041 Nov 04 i 07:04 2°ML08'00 20.00324 AU opposition -1048 Mar 28 i 16:38 27° m 58'06 0°43'37 retrograde -1040 Feb 19 i 10:33 6°M19'25 min. Earth dist. -1048 Mar 29 j 00:36 27° m 57'15 17.52589 AU opposition -1040 May 05 i 13:36 4°M19'19 0°20'43 direct -1048 Jun 13 j 20:18 25° m 53'20 min. Earth dist. -1040 May 05 j 05:02 4°ML20'11 18.03717 AU -1048 Sep 27 j 19:48 direct -1040 Jul 21 j 18:11 2°M17'51 0∘ଫ 6°MJ31'37 0°17'05 conjunction -1048 Oct 02 j 23:08 0°**2**19'23 0°38'14 conjunction -1040 Nov 07 j 13:21 minimum elong -1048 Oct 02 j 23:08 0°**₽**19'23 0°38'14 minimum elong -1040 Nov 07 j 13:21 6°**M**⋅31'37 0°17'05 max. Earth dist. -1048 Oct 02 j 15:08 0°**2**18'08 19.55261 AU max. Earth dist. -1040 Nov 07 j 22:24 6°M32'59 20.07143 AU -1047 Jan 18 j 00:29 4°**£**37'51 retrograde -1039 Feb 23 j 01:38 10°M 43'15 retrograde -1047 Apr 02 j 18:01 2°**2**36'43 0°41'30 -1039 May 10 j 10:25 opposition opposition 8°ML43'12 0°17'10 -1047 Apr 02 j 23:32 min. Earth dist. -1039 May 10 j 00:58 min. Earth dist. 2°**♀**36'08 17.58056 AU 8°M44'10 18.10539 AU -1047 Jun 18 j 22:45 direct -1039 Jul 26 j 12:56 direct 0°**£**32'21 6°M42′05 conjunction -1047 Oct 07 j 19:02 4°**2**57'04 0°36'14 conjunction -1039 Nov 12 j 02:08 10°M 54'11 0°13'52 minimum elong -1047 Oct 07 j 19:02 4°**£**57'04 0°36'14 minimum elong -1039 Nov 12 j 02:08 10°**™**54'11 0°13'52 max. Earth dist. -1047 Oct 07 j 14:24 4°**£**56'20 19.60952 AU behind sun begin -1039 Nov 11 j 22:35 10°M 53'39 -1046 Jan 22 j 20:32 9°**£**14'45 behind sun end -1039 Nov 12 j 05:41 10°M54'42 retrograde -1046 Apr 07 j 19:06 7°**£**13'48 0°39'09 max. Earth dist. -1039 Nov 12 j 13:07 10°ML55'50 20.13965 AU opposition

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 25 Attention, astronomical year style is used: The year -1038 in astronomical counting style is the year 1039 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -1038	in astronomical cou	inting style is the year	1039 BCE in historical	counting style	
	-1038 Feb 14 j 01:26	15° M ₊		retrograde	-1032 Mar 25 j 01:45	10° ₹ ³33'06	
retrograde	-1038 Feb 27 j 17:43	15°ML04'53		opposition	-1032 Jun 10 j 11:51	8° ∡ ³33'40	0°-8'-20
	-1038 Mar 13 j 13:56	15°RML		min. Earth dist.	-1032 Jun 09 j 13:19	8° ∡ ³35'56	18.57990 AU
opposition	-1038 May 15 j 06:09			direct	-1032 Aug 26 j 04:18	6° ∡ ³35′08	
min. Earth dist.	-1038 May 14 j 17:51	13°M06'09	18.17352 AU				
direct	-1038 Jul 31 j 08:41			conjunction	-1032 Dec 10 j 21:15		0°-9'-9
	-1038 Nov 12 j 14:04	15° M ₊		minimum elong	-1032 Dec 10 j 21:15		0°09'11
				behind sun begin	-1032 Dec 10 j 15:41		
conjunction	-1038 Nov 16 j 13:55			behind sun end	-1032 Dec 11 j 02:49		
minimum elong	-1038 Nov 16 j 13:55		0°10'36	max. Earth dist.	-1032 Dec 11 j 20:36		20.61201 AU
behind sun begin	-1038 Nov 16 j 08:48			retrograde	-1031 Mar 29 j 11:47		
behind sun end	-1038 Nov 16 j 19:03		20.20552.444	min. Earth dist.	-1031 Jun 14 j 03:39		
max. Earth dist.	-1038 Nov 17 j 02:57		20.207/3 AU	opposition	-1031 Jun 15 j 02:20		0°-11'-51
retrograde	,	19°M24'22	0000154	direct	-1031 Aug 30 j 16:18	10° × '44'40	
opposition	-1037 May 20 j 01:12				1021 D 15:04-21	1.40.7.4510.4	09 121 17
min. Earth dist.	-1037 May 19 j 12:03		18.241/3 AU	conjunction minimum elong	-1031 Dec 15 j 04:31		
direct	-1037 Aug 05 j 01:36	13 11623 38		behind sun begin	-1031 Dec 15 j 04:31 -1031 Dec 15 j 00:06		0 12 19
conjunction	-1037 Nov 21 j 00:53	100 m 22147	0007!10	behind sun begin	,		
minimum elong	-1037 Nov 21 j 00:53		0°07'17	max. Earth dist.	-1031 Dec 15 j 08:56 -1031 Dec 16 j 04:23		20 67440 ATT
behind sun begin	-1037 Nov 21 j 00:33 -1037 Nov 20 j 18:52		0 0/1/	retrograde	-1031 Dec 10 j 04.23 -1030 Apr 03 j 00:41		20.07449 AU
behind sun end		19°ML33'40		opposition	-1030 Apr 03 j 00.41 -1030 Jun 19 j 15:50		0° 15' 18
max. Earth dist.	,		20.27601 AU	min. Earth dist.	-1030 Jun 18 j 15:21		
retrograde	-1037 Nov 21 j 13:39 -1036 Mar 07 j 22:06		20.27001 AU	direct	-1030 Sep 04 j 04:33		18.70409 AU
opposition	-1036 May 23 j 19:12		0°06'13	direct	-1030 вер он ј он.33	17 7 32 70	
min. Earth dist.	-1036 May 23 j 03:06			conjunction	-1030 Dec 19 j 11:24	18° ∡ 752'02	0°-15'-21
direct	-1036 Aug 08 j 19:06		10.51000710	minimum elong	-1030 Dec 19 j 11:24		
	10501148 00 1 15.00	17 110 11 10		behind sun begin	-1030 Dec 19 j 09:14		0 10 2 .
conjunction	-1036 Nov 24 j 11:07	23°ML49'01	0°04'01	behind sun end	-1030 Dec 19 j 13:35		
minimum elong	-1036 Nov 24 j 11:07		0°04'01	max. Earth dist.	-1030 Dec 20 j 12:45		20.73369 AU
behind sun begin	-1036 Nov 24 j 04:39			retrograde	-1029 Apr 07 j 09:40		
behind sun end	-1036 Nov 24 j 17:34			min. Earth dist.	-1029 Jun 23 j 04:38		18.76211 AU
max. Earth dist.	-1036 Nov 25 j 04:04		20.34433 AU	opposition	-1029 Jun 24 j 04:52		
retrograde	-1035 Mar 12 j 10:31	27°M57'09		direct	-1029 Sep 08 j 14:52	18° ∡ 59'37	
opposition	-1035 May 28 j 12:41	25°M57'20	0°02'32				
min. Earth dist.	-1035 May 27 j 19:44	25°M59'03	18.37851 AU	conjunction	-1029 Dec 23 j 17:48	22° ∡ 757'44	0°-18'-20
direct	-1035 Aug 13 j 10:11	23°M57'38		minimum elong	-1029 Dec 23 j 17:48	22° ∡ 757'44	0°18'21
				max. Earth dist.	-1029 Dec 24 j 19:09	23° ∡ ¹01′27	20.78911 AU
conjunction	-1035 Nov 28 j 20:29	28° ML $03'23$	0°00'40	retrograde	-1028 Apr 10 j 21:12	27° ₹ 101′20	
minimum elong	-1035 Nov 28 j 20:30	28°M03'23	0°00'38	opposition	-1028 Jun 27 j 17:08	25° ∡ 02'19	0°-21'-52
behind sun begin	-1035 Nov 28 j 14:00	28°M02'26		min. Earth dist.	-1028 Jun 26 j 15:32	25° х 04′53	18.81546 AU
behind sun end	-1035 Nov 29 j 03:01	28°M04'20		direct	-1028 Sep 12 j 02:02	23° ∡ ¹05'07	
max. Earth dist.	-1035 Nov 29 j 14:56		20.41274 AU				
	-1034 Jan 01 j 13:18	0° ∡ ¹		conjunction	-1028 Dec 26 j 23:58		
desc. node	-1034 Feb 08 j 05:50	1° ∡ ³36'39		minimum elong	-1028 Dec 26 j 23:58		0°21'14
retrograde	-1034 Mar 17 j 00:49	2° ∡ 10'45		max. Earth dist.	-1028 Dec 28 j 02:30		20.84012 AU
min. Earth dist.	-1034 Jun 01 j 09:26		18.44668 AU		-1027 Feb 21 j 21:12	0°る	
opposition	-1034 Jun 02 j 05:09	0° ∡ 11'03	0°-1'-7	retrograde	-1027 Apr 15 j 05:17	1°る05'17	
T'	-1034 Jun 06 j 18:29	30°RM		i m d r d	-1027 Jun 08 j 22:42		10.06402 ATT
direct	-1034 Aug 18 j 01:20	28°M11'44		min. Earth dist.	-1027 Jul 01 j 03:43		18.86423 AU
	-1034 Oct 24 j 00:29	0° ∡		opposition	-1027 Jul 02 j 04:52		0°-24'-59
. ,.	1024 D 02:05.25	20 71 (102	00 21 42	direct	-1027 Sep 16 j 11:11	27° ₹ 09'19	
conjunction	-1034 Dec 03 j 05:25	2°×16'03	0°-2'-42		-1027 Dec 12 j 07:15	0° ප	
minimum elong	-1034 Dec 03 j 05:24	2°× 7 16'03	0°02'44		1027 D 21 : 05.42	10=05124	09 221 56
behind sun begin behind sun end	-1034 Dec 02 j 22:53 -1034 Dec 03 j 11:55	2° х 15′06 2° х 17′00		conjunction	-1027 Dec 31 j 05:42	1°る05'24 1°る05'24	0°-23'-56 0°23'58
max. Earth dist.	-1034 Dec 03 j 11.33 -1034 Dec 04 j 01:52		20.48048 AU	minimum elong max. Earth dist.	-1027 Dec 31 j 05:41 -1026 Jan 01 j 07:55		20.88663 AU
retrograde	-1034 Dec 04 j 01.32 -1033 Mar 21 j 11:51	6° ₹ 22'41	20.70070 AU	retrograde	-1026 Jan 01 j 07.33 -1026 Apr 19 j 15:26	1 30913 5°308'00	20.00003 AU
opposition	-1033 Mar 21 j 11.31 -1033 Jun 06 j 20:51	4°×22'41	0°-4'-45	opposition	-1026 Apr 19 j 13.26 -1026 Jul 06 j 15:49	3°る08'00	0°-27'-56
min. Earth dist.	-1033 Jun 06 j 00:42		18.51400 AU	min. Earth dist.	-1026 Jul 05 j 13:39		18.90842 AU
direct	-1033 Juli 00 j 00:42 -1033 Aug 22 j 14:52	2° × ⁷ 24'12	10.51 100 710	direct	-1026 Sep 20 j 20:44	1°る12'12	10.70072 AU
	1000 11ug 22 j 17.02	_ /, _¬ 12			. 020 50р 20 ј 20.14	. 01212	
conjunction	-1033 Dec 07 j 13:38	6° ∡ 127'09	0°-5'-58	conjunction	-1025 Jan 04 j 11:09	5° ප 07'21	0°-26'-33
minimum elong	-1033 Dec 07 j 13:38	6° х 27'09	0°05'59	minimum elong	-1025 Jan 04 j 11:09	5°る07'21	0°26'35
behind sun begin	-1033 Dec 07 j 07:24	6° ∡ 126'15		max. Earth dist.	-1025 Jan 05 j 14:27		20.92842 AU
behind sun end	-1033 Dec 07 j 19:51	6° ∡ 128'04		retrograde	-1025 Apr 23 j 22:49	9° ට 09'30	
max. Earth dist.	-1033 Dec 08 j 11:05		20.54719 AU	min. Earth dist.	-1025 Jul 10 j 00:22		18.94806 AU

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1025 in astronomical counting style is the year 1026 BCE in historical counting style. -1025 Jul 11 j 02:02 7°쥥10'29 0°-30'-45 opposition min. Earth dist. -1017 Aug 11 j 17:20 8°≈56'46 19.12872 AU direct -1025 Sep 25 j 04:45 5°**る**13'48 direct -1017 Oct 27 j 02:22 6°≈58'22 c c c

direct	1023 Бер 23 ј 04.43	3 013 40		uncet	1017 Oct 27 J 02.22	0 70/30 22	
conjunction	-1024 Jan 08 j 16:11	9° ප 08'06	0°-29'-1	conjunction	-1016 Feb 09 j 06:08	10° ≈ 49'27	0°-42'-42
minimum elong	-1024 Jan 08 j 16:11	9° ⋜ 08'06	0°29'03	minimum elong	-1016 Feb 09 j 06:08	10° ≈ 49'27	0°42'44
max. Earth dist.	-1024 Jan 09 j 19:07		20.96607 AU	max. Earth dist.	-1016 Feb 10 j 08:17		21.13043 AU
retrograde	-1024 Apr 27 j 07:32		20.90007110	retrograde	-1016 May 29 j 22:00	14°≈50'24	21.150 .5 110
min. Earth dist.			18.98379 AU	min. Earth dist.	-1016 Aug 15 j 00:36		19.13171 AU
opposition	-1024 Jul 14 j 11:44		0°-33'-23	opposition	-1016 Aug 16 j 00:49		0°-47'-41
direct	-1024 Sep 28 j 12:34	9° ට 14'13	0 22 23	direct		10°≈55'25	0 1, 11
uncet	1021 Sep 20 j 12.31) 01113		uncer	1010 000 50 1 00.25	10 .0.00 20	
conjunction	-1023 Jan 11 j 20:57	13° る 07'46	0°-31'-20	conjunction	-1015 Feb 12 j 11:41	14° ≈ 46'34	0°-43'-34
minimum elong	-1023 Jan 11 j 20:57		0°31'21	minimum elong	-1015 Feb 12 j 11:41		0°43'36
max. Earth dist.	-1023 Jan 13 j 01:04			max. Earth dist.	-1015 Feb 13 j 13:41		
retrograde	-1023 May 01 j 14:45				-1015 Feb 16 j 10:10		
opposition	-1023 Jul 18 j 20:53		0°-35'-51	retrograde	-1015 Jun 03 j 05:13	18° ≈ 47'40	
min. Earth dist.	-1023 Jul 17 j 18:37		19.01573 AU	min. Earth dist.	-1015 Aug 19 j 08:32	16° ≈ 50'51	19.12882 AU
direct	-1023 Oct 02 j 19:17			opposition	-1015 Aug 20 j 07:20		0°-48'-31
				·FF	-1015 Oct 17 j 10:24		
conjunction	-1022 Jan 16 j 01:38	17° る 06'29	0°-33'-29	direct	-1015 Nov 03 j 11:09		
minimum elong	-1022 Jan 16 j 01:38		0°33'31		-1015 Nov 20 j 07:24		
max. Earth dist.	-1022 Jan 17 j 05:13						
retrograde	-1022 May 05 j 23:00			conjunction	-1014 Feb 16 j 17:35	18° ≈ 43'55	0°-44'-14
min. Earth dist.	-1022 Jul 22 j 02:19		19.04425 AU	minimum elong	-1014 Feb 16 j 17:35		0°44'14
opposition	-1022 Jul 23 j 05:16		0°-38'-8	max. Earth dist.	-1014 Feb 17 j 17:26		21.12473 AU
direct	-1022 Oct 07 j 01:39			retrograde	-1014 Jun 07 j 14:08		
				opposition	-1014 Aug 24 j 13:33		0°-49'-8
conjunction	-1021 Jan 20 j 06:16	21° る 04'28	0°-35'-28	min. Earth dist.	-1014 Aug 23 j 15:48		19.12003 AU
minimum elong	-1021 Jan 20 j 06:16		0°35'29	direct	-1014 Nov 07 j 15:04		19.12009110
max. Earth dist.	-1021 Jan 21 j 10:46		21.05662 AU				
retrograde	-1021 May 10 j 05:52		21.00002110	conjunction	-1013 Feb 20 j 23:51	22° ≈ 41'32	0°-44'-41
min. Earth dist.	-1021 Jul 26 j 10:53		19.06910 AU	minimum elong	-1013 Feb 20 j 23:51		0°44'42
opposition	-1021 Jul 27 j 13:21		0°-40'-13	max. Earth dist.	-1013 Feb 21 j 23:12		
direct	-1021 Oct 11 j 07:01			retrograde	-1013 Jun 11 j 21:22		
	1021 000 11 1 0 7.01	21 01000		opposition	-1013 Aug 28 j 19:45		0°-49'-30
conjunction	-1020 Jan 24 j 10:38	25° る 01'52	0°-37'-17	min. Earth dist.	-1013 Aug 27 j 23:28		19.10520 AU
minimum elong	-1020 Jan 24 j 10:38		0°37'19	direct	-1013 Nov 11 j 19:46		19.10020110
max. Earth dist.	-1020 Jan 25 j 14:25						
retrograde	-1020 May 13 j 14:31			conjunction	-1012 Feb 25 j 06:09	26° ≈ 39'25	0°-44'-54
opposition	-1020 Jul 30 j 21:04		0°-42'-7	minimum elong	-1012 Feb 25 j 06:09		0°44'55
min. Earth dist.	-1020 Jul 29 j 18:11			max. Earth dist.	-1012 Feb 26 j 03:19		
direct	-1020 Oct 14 j 12:33				-1012 May 04 j 11:47	0°) €	
				retrograde	-1012 Jun 15 j 06:37	0°) 41′15	
conjunction	-1019 Jan 27 j 15:17	28° る 58'54	0°-38'-55		-1012 Jul 27 j 20:57	30°R≈	
minimum elong	-1019 Jan 27 j 15:17		0°38'56	min. Earth dist.	-1012 Aug 31 j 06:42	28° ≈ 43'46	19.08507 AU
max. Earth dist.	-1019 Jan 28 j 19:49		21.09898 AU	opposition	-1012 Sep 01 j 01:51	28° ≈ 41'50	0°-49'-38
	-1019 Feb 14 j 15:03	0° ≈		direct	-1012 Nov 15 j 00:13	26° ≈ 45'34	
retrograde	-1019 May 17 j 21:16	2°≈59'38			-1011 Feb 17 j 11:18	0°) €	
min. Earth dist.	-1019 Aug 03 j 02:16	1° ≈ 03'08	19.10762 AU				
opposition	-1019 Aug 04 j 04:23	1° ≈ 00'31	0°-43'-50	conjunction	-1011 Feb 28 j 13:06	0°) 37′39	0°-44'-55
rr	-1019 Aug 30 j 16:12			minimum elong	-1011 Feb 28 j 13:06	0°) 37′39	0°44'57
direct	-1019 Oct 18 j 17:09	29° る 04'28		max. Earth dist.	-1011 Mar 01 j 09:51	0°) 40′35	21.07273 AU
	-1019 Dec 04 j 21:23	0° ≈		retrograde	-1011 Jun 19 j 14:02	4°) €39'48	
	,			opposition	-1011 Sep 05 j 07:42	2°) 40′14	0°-49'-32
conjunction	-1018 Jan 31 j 19:59	2° ≈ 55'44	0°-40'-22	min. Earth dist.	-1011 Sep 04 j 13:58		19.05996 AU
minimum elong	-1018 Jan 31 j 19:59	2° ≈ 55'44	0°40'24	direct	-1011 Nov 19 j 04:18	0°) 43′47	
max. Earth dist.	-1018 Feb 01 j 23:24		21.11422 AU		,		
retrograde	-1018 May 22 j 06:15	6°≈56'29		conjunction	-1010 Mar 04 j 20:20	4°) 36′18	0°-44'-43
min. Earth dist.	-1018 Aug 07 j 09:27	4°≈59'59	19.12063 AU	minimum elong	-1010 Mar 04 j 20:20	4°) (36'18	0°44'44
opposition	-1018 Aug 08 j 11:25	4°≈57'23	0°-45'-19	max. Earth dist.	-1010 Mar 05 j 14:49		21.04553 AU
direct	-1018 Oct 22 j 21:53	3°≈01'24	= */	retrograde	-1010 Jun 23 j 23:42	8° ∺ 38'50	1.0.000 710
	1010 000 22 121.00	5 . U.Q.1 2-T		opposition	-1010 Sep 09 j 13:37	6° ∺ 39'06	0°-49'-12
conjunction	-1017 Feb 05 j 00:57	6° ≈ 52'33	0°-41'-38	min. Earth dist.	-1010 Sep 08 j 21:06	6° X 40'47	19.03064 AU
minimum elong	-1017 Feb 05 j 00:57	6°≈52'33	0°41'40	direct	-1010 Sep 08 j 21:00 -1010 Nov 23 j 09:18	4°) 42′26	.7.03007 AU
max. Earth dist.	-1017 Feb 05 j 00.37		21.12478 AU	uncot	1010 110 v 23 j 03.10	7 / 74 40	
retrograde	-1017 May 26 j 13:02	0 ≈50 30 10°≈53'21	21.127/0 AU	conjunction	-1009 Mar 09 j 04:03	8° ¥ 35'30	0°-44'-18
opposition	-1017 May 26 j 13:02 -1017 Aug 12 j 18:10	8°≈54'16	0°-46'-37	minimum elong	-1009 Mar 09 j 04:03	8°\(\frac{1}{35}\)30	0°-44'-18 0°44'19
оррозини	-101 / Aug 12 J 16.10	o 🗫 24 10	v -4 0 <i>-31</i>	minimum ciong	-1007 WIAI UFJ U4.U3	o N3330	U 77 17

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -1009 in astronomical counting style is the year 1010 BCE in historical counting style. -1009 Mar 09 i 22:09 8° \(38'05 \) 21.01414 AU max. Earth dist. -1001 Apr 11 j 21:22 11° Υ 08'15 20.64045 AU max. Earth dist. -1009 Jun 28 j 07:47 12° ¥ 38'28 retrograde -1001 Jul 31 j 23:30 15° Υ 16'03 retrograde -1009 Sep 13 j 19:32 10° ★38'36 0°-48'-37 opposition -1001 Oct 16 j 04:04 13°Υ15'17 0°-35'-38 opposition -1009 Sep 13 j 04:19 10° **★** 40'10 18.99733 AU min. Earth dist. -1001 Oct 16 j 02:12 13°Υ15'29 18.60930 AU min. Earth dist. -1009 Nov 27 j 13:18 -1001 Dec 29 j 17:01 11°**Υ**16'20 direct 8°**)** 41'43 direct -1008 Mar 12 j 12:13 12°**)** 35'25 0°-43'-39 conjunction -1000 Apr 15 j 08:17 15° Υ 18'21 0°-31'-2 conjunction -1008 Mar 12 j 12:13 12° **★** 35'25 -1000 Apr 15 j 08:17 15°**Υ**18'21 minimum elong 0°43'41 minimum elong 0°31'02 -1008 Mar 13 j 03:59 12° **∺** 37'40 20.97919 AU -1000 Apr 15 j 08:08 15°**Υ**18'20 20.57747 AU max. Earth dist. max. Earth dist. retrograde -1008 Jul 01 j 17:46 16° ★ 38'53 retrograde -1000 Aug 04 j 12:13 19°**Υ**27'27 -1000 Oct 19 j 12:59 17°**Υ**26'31 0°-33'00 min. Earth dist. -1008 Sep 16 j 11:41 14° **X** 40'18 18.96069 AU opposition -1008 Sep 17 j 01:35 14° **★** 38'52 -1000 Oct 19 j 13:35 17°**Υ**26'27 18.54459 AU opposition 0°-47'-48 min. Earth dist. -1008 Nov 30 j 18:35 12°**₭**41'46 -999 Jan 02 j 01:52 15°**Y**27′09 direct direct conjunction -1007 Mar 16 j 21:07 16° **¥** 36'12 0°-42'-49 conjunction -999 Apr 19 j 23:40 19°**Y**30'32 0°-28'-34 minimum elong -1007 Mar 16 j 21:07 16° ¥ 36'12 0°42'49 minimum elong -999 Apr 19 j 23:41 19°**Υ**30'32 0°28'35 max. Earth dist. -1007 Mar 17 j 12:24 16° **X** 38'23 20.94083 AU max. Earth dist. -999 Apr 19 j 22:17 19°**Y**30′20 20.51118 AU retrograde -1007 Jul 06 j 03:09 20° **₭** 40'12 retrograde -999 Aug 09 j 01:48 23°**Y**40'26 opposition -1007 Sep 21 j 07:49 18° **¥** 40'05 0°-46'-45 opposition -999 Oct 23 j 22:21 21°**Ƴ**39'19 0°-30'-11 min. Earth dist. -1007 Sep 20 j 19:15 18° \(\frac{1}{4}\)1'22 18.92060 AU min. Earth dist. -999 Oct 24 j 00:26 21° **Y**39'06 18.47680 AU direct -1007 Dec 04 j 23:34 16° \(\frac{1}{42}\)'45 direct -998 Jan 06 j 12:09 19°Y39'33 conjunction -1006 Mar 21 i 06:34 20° **)** € 38'01 0°-41'-45 conjunction -998 Apr 24 i 15:36 23°**Ƴ**44′18 0°-25'-56 minimum elong -1006 Mar 21 j 06:34 20° **)** (38'01 0°41'46 minimum elong -998 Apr 24 j 15:37 23°**Y**44'18 0°25'56 max. Earth dist. -1006 Mar 21 j 19:14 20°**)** € 39'49 20.89927 AU max. Earth dist. -998 Apr 24 j 10:45 23°Υ43'36 20.44224 AU retrograde -1006 Jul 10 j 13:25 24° \ 42'38 retrograde -998 Aug 13 j 15:24 27°Y55'02 -1006 Sep 25 j 14:12 22° \(\frac{1}{2}\)42'24 0°-45'-28 opposition -998 Oct 28 j 08:12 25°**Y**'53'43 0°-27'-11 opposition -1006 Sep 25 j 03:15 22° **X** 43'31 18.87743 AU min. Earth dist. -998 Oct 28 j 12:43 25°Υ53'14 18.40689 AU min. Earth dist. -1006 Dec 09 j 04:47 20° **★** 44'50 direct -997 Jan 10 j 22:32 23°Y53'30 direct -997 Apr 29 j 08:31 -1005 Mar 25 j 16:50 24° ¥41'02 0°-40'-29 27°**Y**′59'43 0°-23'-8 conjunction conjunction -1005 Mar 25 j 16:50 24° \(\mathbf{H}\)41'02 0°40'29 minimum elong -997 Apr 29 j 08:31 27°**Υ**'59'43 0°23'08 minimum elong -1005 Mar 26 j 04:51 24°**)** 42'45 20.85449 AU -997 Apr 29 j 02:41 max. Earth dist. 27°Υ58'52 20.37154 AU max. Earth dist. -997 Jun 03 j 23:12 0° 8 retrograde -1005 Sep 29 j 20:58 26° ¥45'59 0°-43'-58 -997 Aug 18 j 05:59 2°**8**11'17 opposition retrograde -1005 Sep 29 j 11:27 26° ★46'58 18.83097 AU -997 Nov 01 j 18:34 0°**8**09'47 0°-24'00 min. Earth dist. opposition -1005 Dec 13 j 11:08 24° ★ 48'13 -997 Nov 02 j 00:13 0°809'11 18.33554 AU direct min. Earth dist. -997 Nov 05 j 14:50 30°RΥ conjunction -1004 Mar 29 j 03:38 28° ¥45'25 0°-39'00 direct -996 Jan 15 j 10:08 28°**Y**09'07 minimum elong -1004 Mar 29 j 03:38 28° **∺**45'25 0°39'01 -996 Mar 23 j 02:31 0°8 max. Earth dist. -1004 Mar 29 j 12:46 28° **∺**46'44 20.80653 AU -1004 Apr 20 j 03:39 $0^{\circ}\Upsilon$ -996 May 03 j 02:00 2°816'49 0°-20'-12 conjunction retrograde -1004 Jul 18 j 11:01 2°Y51'25 -996 May 03 j 02:00 2°**8**16'49 0°20'12 minimum elong -1004 Oct 03 j 04:09 0°Υ51'00 0°-42'-13 max. Earth dist. -996 May 02 j 17:00 2°815'30 20.29981 AU opposition min. Earth dist. -1004 Oct 02 j 20:35 0°**Υ**51'47 18.78127 AU -996 Aug 21 j 20:33 6°**8**29'15 retrograde -1004 Oct 24 j 09:16 30°R € -996 Nov 05 i 05:36 4°827'34 0°-20'-41 opposition -1004 Dec 16 j 16:57 28° ¥ 52'58 -996 Nov 05 i 13:37 4°826'43 18.26361 AU direct min. Earth dist. -1003 Feb 06 i 13:59 -995 Jan 18 j 21:57 2°**8**26'28 direct -1003 Apr 02 j 15:38 2°Y51'18 0°-37'-18 -995 May 07 i 20:37 6°835'43 0°-17'-8 conjunction conjunction -1003 Apr 02 i 15:38 2°Υ′51'18 0°37'19 minimum elong -995 May 07 i 20:37 6°835'43 0°17'07 minimum elong max. Earth dist. -1003 Apr 02 j 23:45 2°**Υ**52'27 20.75500 AU max. Earth dist. -995 May 07 i 10:45 6°834'16 20.22775 AU -1003 Jul 22 j 23:04 6°**Y**58′01 retrograde -995 Aug 26 j 12:39 10°849'00 retrograde -1003 Oct 07 j 11:32 4°Υ57'31 0°-40'-14 -995 Nov 09 j 17:05 opposition opposition 8°847'10 0°-17'-13 4°**Υ**′58'08 18.72781 AU min. Earth dist. -1003 Oct 07 j 05:43 min. Earth dist. -995 Nov 10 j 02:00 8°846'13 18.19160 AU 2°Y59'14 direct -1003 Dec 21 j 00:42 direct -994 Jan 23 j 11:16 6°**8**45'38 -1002 Apr 07 j 04:22 6°Υ′58'44 0°-35'-25 -994 May 12 j 15:55 10°856'28 0°-13'-57 conjunction conjunction -1002 Apr 07 j 04:22 6°Υ58'44 0°35'25 -994 May 12 j 15:55 10°**8**56'28 0°13'58 minimum elong minimum elong -1002 Apr 07 j 09:03 6°**Y**59'24 20.69972 AU -994 May 12 j 12:41 10°**8**56'00 max. Earth dist. behind sun begin -1002 Jul 27 j 10:41 11°**Υ**06'15 -994 May 12 j 19:09 10°**8**56'56 retrograde behind sun end opposition -1002 Oct 11 j 19:35 9°**Υ**05'37 0°-38'-2 max. Earth dist. -994 May 12 j 03:07 10°**8**54'35 20.15599 AU min. Earth dist. -1002 Oct 11 j 16:05 9°**Y**05'59 18.67057 AU -994 Aug 11 j 02:23 15°8 direct -1002 Dec 25 j 07:57 7°**Y**07′01 retrograde -994 Aug 31 j 04:24 15°**8**10'39 -994 Sep 20 j 10:59 15°₹**8** -1001 Apr 11 j 17:55 11°**Y**07'45 0°-33'-19 -994 Nov 14 j 05:31 13°808'41 0°-13'-38 conjunction opposition -1001 Apr 11 j 17:55 11°**Υ**07'45 0°33'20 min. Earth dist. -994 Nov 14 j 16:42 13°**8**07'30 18.12033 AU minimum elong

•	ical year style is used: T		•	/ /			ge 28
direct	-993 Jan 28 j 00:09	11° 8 06'44	n astronomicai cou	conjunction	-987 Jun 14 j 07:51	12° ∏ 19'41	0°10'16
direct	-993 May 12 j 02:55	15°8		minimum elong	-987 Jun 14 j 07:51	12 ∏ 1941 12° ∏ 19'41	0°10'17
	-993 Way 12 J 02.33	15 0		behind sun begin	-987 Jun 14 j 07:31	12 Ⅲ 1941 12° Ⅲ 18'53	0 1017
conjunction	-993 May 17 j 12:01	15° 8 19'11	0° 10' 40	behind sun end	-987 Jun 14 j 02.32	12 ∏ 18 33	
minimum elong	-993 May 17 j 12:01	15° 8 19'11	0°10'40	retrograde	-987 Oct 01 j 22:43	12 H 2028 16° H 39'45	
behind sun begin	-993 May 17 j 12.01 -993 May 17 j 06:52	15° 8 18'26	0 10 40	Č	-987 Dec 14 j 18:04	16 П 3943 14° П 37'24	0°13'18
behind sun begin	-993 May 17 j 06.32	15° 8 19'56		opposition min. Earth dist.	-987 Dec 15 j 14:43		17.65911 AU
max. Earth dist.	-993 May 16 j 22:31		20.08523 AU	direct	-986 Feb 27 j 23:36	14 ∏ 33'09 12° ∏ 32'54	17.03911 AU
retrograde	-993 Nay 10 j 22:31 -993 Sep 04 j 22:41	19° 8 34'16	20.06323 AU	max. Earth dist.	-986 Jun 18 j 07:48		19.62891 AU
Č	-993 Nov 18 j 18:33	17° 8 32'12	00 01 57	max. Earm dist.	-980 Juli 18 j 07.48	10 113239	19.02091 AU
opposition min. Earth dist.	-993 Nov 19 j 06:19		18.05014 AU	agniumation	006 Jun 10:00:51	16° Ⅱ 56'38	0°13'43
direct		17 8 30 30	18.03014 AU	conjunction	-986 Jun 19 j 09:51	16° Д 56'38	0°13'44
direct	-992 Feb 01 j 15:13	13 029 32		minimum elong	-986 Jun 19 j 09:51	16° Д 56'07	0 13 44
	002 M 21 : 00-07	100 42157	0°-7'-19	behind sun begin behind sun end	-986 Jun 19 j 06:24	16° Д 57'08	
conjunction	-992 May 21 j 09:07	19° 8 43'57			-986 Jun 19 j 13:17	16° Д 3708 21° Д 17'21	
minimum elong	-992 May 21 j 09:07	_	0°07'20	retrograde	-986 Oct 06 j 19:27		0017100
behind sun begin	-992 May 21 j 02:55	19° 8 43'03		opposition	-986 Dec 19 j 13:02	19° Ⅱ 14'55	
behind sun end	-992 May 21 j 15:18	19° 8 44'51	20.01572 411	min. Earth dist.	-986 Dec 20 j 11:46		17.59967 AU
max. Earth dist.	-992 May 20 j 16:56		20.01572 AU	direct	-985 Mar 04 j 20:08	17° Ⅱ 10'03	10.57002 ATT
retrograde	-992 Sep 08 j 15:54	23° 8 59'56	00 (1.10	max. Earth dist.	-985 Jun 23 j 08:31	21°Щ30′55	19.57083 AU
opposition	-992 Nov 22 j 08:22	21° 8 57'49			005 7 04:10 00	210 T 25110	001.510.5
min. Earth dist.	-992 Nov 22 j 22:32		17.98145 AU	conjunction	-985 Jun 24 j 12:09	21° Ⅲ 35'10	
direct	-991 Feb 05 j 05:20	19° 8 55'06		minimum elong	-985 Jun 24 j 12:09	21° Ⅲ 35'10	0°17'08
				retrograde	-985 Oct 11 j 17:48	25° ∏ 56'31	
conjunction	-991 May 26 j 07:16	24° 8 10'53		opposition	-985 Dec 24 j 08:34	23° ∏ 53'59	
minimum elong	-991 May 26 j 07:15	24° 8 10'52	0°03'54	min. Earth dist.	-985 Dec 25 j 07:25		17.54308 AU
behind sun begin	-991 May 26 j 00:33	24° 8 09'54		direct	-984 Mar 08 j 19:15	21° ∏ 48'45	
behind sun end	-991 May 26 j 13:58	24° 8 11'51		max. Earth dist.	-984 Jun 27 j 11:08	26° Ⅲ 10′52	19.51578 AU
max. Earth dist.	-991 May 25 j 14:04		19.94779 AU				
retrograde	-991 Sep 13 j 12:13	28° 8 27'44		conjunction	-984 Jun 28 j 15:13	26° Ⅱ 15'12	0°20'25
opposition	-991 Nov 26 j 22:58	26° 8 25'35		minimum elong	-984 Jun 28 j 15:13	26° Ⅱ 15'11	0°20'25
min. Earth dist.	-991 Nov 27 j 13:43		17.91421 AU		-984 Sep 08 j 18:55	0 \circ \odot	
direct	-990 Feb 09 j 21:54	24° 8 22'32		retrograde	-984 Oct 15 j 15:26	0° © 37'03	
max. Earth dist.	-990 May 30 j 10:29	28° 8 37'02	19.88118 AU		-984 Nov 22 j 02:29	30°Ŗ Ⅱ	
				opposition	-984 Dec 28 j 04:52	28° ∏ 34'28	0°24'29
conjunction	-990 May 31 j 06:05	28° 8 39'58	0°00'-21	min. Earth dist.	-984 Dec 29 j 05:23		17.48994 AU
minimum elong	-990 May 31 j 06:04	28° 8 39'58	0°00'20	direct	-983 Mar 13 j 17:53	26° Ⅱ 28'52	
behind sun begin	-990 May 30 j 23:18	28° 8 38'59			-983 Jun 18 j 10:52	0 \circ \odot	
behind sun end	-990 May 31 j 12:50	28° 8 40'57					
	-990 Jun 22 j 17:23	Π \circ 0		conjunction	-983 Jul 03 j 18:31	0° ഇ 56'33	0°23'35
asc. node	-990 Jul 06 j 13:32	0° Ⅱ 46′01		minimum elong	-983 Jul 03 j 18:31	0° ഇ 56'33	0°23'36
retrograde	-990 Sep 18 j 07:12	2° ∏ 57'42		max. Earth dist.	-983 Jul 02 j 12:54	0° © 51'58	19.46470 AU
opposition	-990 Dec 01 j 14:33	0° Ⅱ 55'31	0°01'34	retrograde	-983 Oct 20 j 14:28	5° © 18'54	
min. Earth dist.	-990 Dec 02 j 07:46	0° Ⅱ 53'39	17.84840 AU	opposition	-982 Jan 02 j 01:53	3° 5 16'14	0°27'57
	-990 Dec 23 j 18:31	30°Ŗ႘		min. Earth dist.	-982 Jan 03 j 02:14	3° © 13'34	17.44113 AU
direct	-989 Feb 14 j 14:00	28° 8 52'07		direct	-982 Mar 18 j 18:42	1° © 10'18	
	-989 Apr 07 j 06:26	Π $^{\circ}0$					
max. Earth dist.	-989 Jun 04 j 08:57	3° Ⅱ 08'03	19.81604 AU	conjunction	-982 Jul 08 j 22:03	5° © 39'07	0°26'37
				minimum elong	-982 Jul 08 j 22:03	5° © 39'07	0°26'37
conjunction	-989 Jun 05 j 05:53	3° Ⅱ 11'12	0°03'15	max. Earth dist.	-982 Jul 07 j 17:04	5° © 34'37	19.41815 AU
minimum elong	-989 Jun 05 j 05:52	3° Ⅱ 11'12	0°03'15	retrograde	-982 Oct 25 j 13:05	10° © 01'54	
behind sun begin	-989 Jun 04 j 23:07	3° Ⅱ 10′13		opposition	-981 Jan 06 j 23:44	7° © 59'11	0°31'15
behind sun end	-989 Jun 05 j 12:37	3° Ⅱ 12'12		min. Earth dist.	-981 Jan 08 j 00:57	7° 9 56'25	17.39722 AU
retrograde	-989 Sep 23 j 04:34	7° Ⅱ 29'46		direct	-981 Mar 23 j 18:44	5° © 52'58	
opposition	-989 Dec 06 j 06:47	5° Ⅱ 27'33	0°05'30	max. Earth dist.	-981 Jul 12 j 19:35	10° © 18'06	19.37699 AU
min. Earth dist.	-989 Dec 07 j 00:34	5° Ⅱ 25'37	17.78391 AU				
direct	-988 Feb 19 j 08:20	3° Ⅱ 23'48		conjunction	-981 Jul 14 j 01:46	10° © 22'49	0°29'28
max. Earth dist.	-988 Jun 08 j 07:27	7° Ⅱ 41'00	19.75207 AU	minimum elong	-981 Jul 14 j 01:46	10° 5 22'49	0°29'28
				retrograde	-981 Oct 30 j 12:55	14° © 45'58	
conjunction	-988 Jun 09 j 06:30	7° Ⅱ 44'30	0°06'46	opposition	-980 Jan 11 j 22:00	12° © 43'13	0°34'20
minimum elong	-988 Jun 09 j 06:30	7° Ⅱ 44'30	0°06'48	min. Earth dist.	-980 Jan 12 j 22:53	12° 5 40'30	17.35905 AU
behind sun begin	-988 Jun 09 j 00:11	7° Ⅱ 43'34		direct	-980 Mar 27 j 20:33	10° 5 36'46	
behind sun end	-988 Jun 09 j 12:48	7° Ⅱ 45'26		max. Earth dist.	-980 Jul 17 j 00:57	15° © 03'02	19.34174 AU
retrograde	-988 Sep 27 j 00:45	12° Ⅲ 03′50					
opposition	-988 Dec 10 j 00:08	10° Ⅱ 01'33	0°09'25	conjunction	-980 Jul 18 j 05:55	15° 5 07'34	0°32'08
min. Earth dist.	-988 Dec 10 j 20:23	9° Ⅱ 59'21	17.72072 AU	minimum elong	-980 Jul 18 j 05:55	15° 5 07'34	0°32'09
direct	-987 Feb 23 j 02:40	7° Ⅱ 57'26		retrograde	-980 Nov 03 j 12:48	19° 5 31'02	
max. Earth dist.	-987 Jun 13 j 07:08	12° Ⅱ 15'55	19.68961 AU	opposition	-979 Jan 15 j 21:12	17° © 28'19	0°37'12

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Earth dist. 25° Ω50'28 17.28223 AU -979 Jul 23 j 09:57 -971 May 11 j 04:59 conjunction 19°953'19 0°34'36 direct 23°**Ω**46′16 minimum elong -979 Jul 23 j 09:57 19°953'19 0°34'36 -979 Nov 08 j 13:24 28° Ω 19'09 0°44'43 retrograde 24°9517'04 conjunction -971 Aug 31 j 15:16 28°**Ω**19'09 0°44'43 -978 Jan 20 j 20:57 -971 Aug 31 j 15:16 opposition 22°514'25 0°39'50 minimum elong 28°**Ω**15'41 19.29011 AU 22°511'43 17.30123 AU -971 Aug 30 j 17:21 min. Earth dist. -978 Jan 21 j 21:37 max. Earth dist. direct -978 Apr 07 j 00:12 20°907'42 -971 Sep 27 j 18:03 0° m max. Earth dist. -978 Jul 27 j 10:06 24°535'36 19.29031 AU retrograde -971 Dec 16 j 19:26 2°m/42'10 -970 Feb 28 j 12:42 0° Mp 40'20 $0^{\circ}49'52$ opposition -978 Jul 28 j 14:14 -970 Mar 01 j 08:17 0° Mp 38'13 17.30012 AU conjunction 24°5640'02 0°36'49 min. Earth dist. minimum elong -978 Jul 28 j 14:14 24°9540'02 0°36'50 -970 Mar 16 j 09:03 30°RΩ retrograde -978 Nov 13 j 14:40 29°903'58 direct -970 May 16 j 09:01 28°**Ω**34'05 opposition -977 Jan 25 j 21:20 27°9501'26 0°42'11 -970 Jul 13 j 18:21 0° m min. Earth dist. -977 Jan 26 j 21:34 26°558'47 17.28187 AU direct -977 Apr 12 j 02:41 24°954'42 conjunction -970 Sep 05 j 16:56 3° Mp 06'23 0°44'38 minimum elong -970 Sep 05 j 16:56 3° Mp 06'23 0°44'39 conjunction -977 Aug 02 j 18:23 29°527'35 0°38'48 max. Earth dist. -970 Sep 04 j 20:06 3° Mp 03'05 19.31072 AU minimum elong -977 Aug 02 j 18:23 29°**©**27'35 0°38'49 retrograde -970 Dec 21 j 20:15 7° m 28'54 max. Earth dist. -977 Aug 01 i 13:48 29°523'05 19.27405 AU opposition -969 Mar 05 i 15:24 5° m 27'07 0°49'36 -977 Aug 11 j 08:20 $0^{\circ}\Omega$ min. Earth dist. -969 Mar 06 i 08:33 5° m 25'16 17.32331 AU retrograde -977 Nov 18 i 15:47 3°**Ω**51'40 direct -969 May 21 j 15:17 3° m 21'00 -976 Jan 30 j 22:19 opposition 1°Ω49'16 0°44'16 min. Earth dist. -976 Jan 31 i 22:27 1°**Ω**46'37 17.26865 AU -969 Sep 10 j 17:59 7° m 52'34 0°44'14 conjunction -976 Mar 21 j 07:33 30°R95 -969 Sep 10 j 17:59 7° m 52'34 0°44'14 minimum elong -976 Apr 16 j 04:54 29°542'32 max. Earth dist. -969 Sep 09 j 23:44 7° mp 49'41 19.33661 AU direct -976 May 11 j 21:25 -969 Dec 26 j 18:35 12° m) 14'31 0° Ω retrograde -968 Mar 09 j 18:18 10° m 12'47 0°48'58 opposition -976 Aug 06 j 22:40 4°Ω15'52 0°40'32 -968 Mar 10 j 10:47 10° Mp 11'01 17.35192 AU conjunction min. Earth dist. -976 Aug 06 j 22:40 8°M)06'50 4°Ω15'52 0°40'32 -968 May 25 j 18:49 minimum elong direct -976 Aug 05 j 19:37 4°**Ω**11'35 19.26367 AU max. Earth dist. -976 Nov 22 j 17:56 8°**Ω**39'58 -968 Sep 14 j 18:01 12° mp 37'31 0°43'31 retrograde conjunction -975 Feb 03 j 23:47 6°**Ω**37'42 0°46'02 -968 Sep 14 j 18:01 12° m 37'31 0°43'32 opposition minimum elong -968 Sep 14 j 00:58 -975 Feb 04 j 23:02 6°**Ω**35'10 17.26096 AU 12° Mg 34'49 19.36813 AU min. Earth dist. max. Earth dist. -968 Dec 30 j 18:31 -975 Apr 21 j 09:10 4°**Ω**31'01 16° Mp 58'51 direct retrograde max. Earth dist. -975 Aug 10 j 23:47 9°**Ω**00'21 19.25870 AU opposition -967 Mar 14 j 20:53 14° Mp 57'11 0°48'01 min. Earth dist. -967 Mar 15 j 10:31 14° m 55'44 17.38628 AU 9°**Ω**04'36 0°41'58 conjunction -975 Aug 12 j 02:44 direct -967 May 30 j 23:17 12° m 51'26 minimum elong -975 Aug 12 j 02:44 9°**Ω**04'36 0°41'59 retrograde -975 Nov 27 j 18:19 13°**Ω**28'41 -967 Sep 19 j 17:25 17° Mp 21'07 0°42'32 conjunction -974 Feb 09 j 01:55 11°Ω26'32 0°47'29 minimum elong -967 Sep 19 j 17:25 17° Mp 21'07 0°42'32 opposition min. Earth dist. -974 Feb 10 j 01:10 11°**Ω**24'00 17.25876 AU max. Earth dist. -967 Sep 19 j 03:40 17° Mp 18'57 19.40542 AU -974 Apr 26 j 11:54 9°**Ω**19'54 -966 Jan 04 j 16:47 21° Mp 41'47 direct retrograde -974 Aug 16 i 04:51 13°Ω49'31 19.25909 AU -966 Mar 19 j 23:26 19° m 40'13 0°46'44 max. Earth dist. opposition -966 Mar 20 j 11:47 19° m 38'54 17.42646 AU min. Earth dist. -974 Aug 17 i 06:25 13°Ω53'34 0°43'07 -966 Jun 05 i 02:09 conjunction direct 17° m 34'44 -974 Aug 17 i 06:25 13°Ω53'34 0°43'07 minimum elong -974 Sep 03 i 21:44 15°Ω -966 Sep 24 j 15:43 22° m 03'19 0°41'15 conjunction -974 Dec 02 i 20:19 retrograde 18°Ω17'31 minimum elong -966 Sep 24 i 15:43 22° m 03'19 0°41'15 -973 Feb 14 i 04:16 16°Ω15'28 0°48'36 max. Earth dist. -966 Sep 24 j 03:13 22° m 01'21 19.44859 AU opposition min. Earth dist. -973 Feb 15 j 02:02 16°**Ω**13'05 17.26158 AU retrograde -965 Jan 09 j 15:42 26° m 23'18 -973 Mar 17 j 05:06 -965 Mar 25 j 01:30 15°RΩ opposition 24° m 21'51 0°45'09 direct -973 May 01 j 17:58 14° **Ω**08'55 min. Earth dist. -965 Mar 25 j 10:58 24° m/20'51 17.47238 AU -965 Jun 10 j 04:55 -973 Jun 15 j 04:29 $15^{\circ}\Omega$ direct 22° Mp 16'41 -973 Aug 21 j 09:07 18°**Ω**38'34 19.26440 AU max. Earth dist. -965 Sep 29 j 13:28 26° Mp 44'05 $0^{\circ}39'43$ conjunction -973 Aug 22 j 09:54 18°**Ω**42'30 0°43'58 -965 Sep 29 j 13:28 0°39'43 conjunction minimum elong 26° m 44'05 -973 Aug 22 j 09:54 0°43'58 max. Earth dist. -965 Sep 29 j 04:24 26° Mp 42'40 19.49719 AU minimum elong 18°**Ω**42'30 -973 Dec 07 j 19:34 -965 Nov 27 j 00:28 0∘**⊽** retrograde 23°**Ω**06′13 opposition -972 Feb 19 j 06:51 21°**Ω**04'15 0°49'23 retrograde -964 Jan 14 j 13:15 1°**2**03′20 min. Earth dist. -972 Feb 20 j 04:42 21°**Ω**01'53 17.26945 AU -964 Mar 05 j 08:51 30°R, Mp direct -972 May 05 j 21:49 18°**Ω**57'47 opposition -964 Mar 29 j 03:18 29° m 02'03 0°43'17 min. Earth dist. -964 Mar 29 j 11:13 29° Mp 01'13 17.52336 AU -972 Aug 26 j 12:55 23°**Ω**31'07 0°44'30 direct -964 Jun 14 j 07:36 26° m 57'17 conjunction -972 Aug 26 j 12:55 23°**Ω**31'07 0°44'30 -964 Sep 10 j 22:28 0∘**⊽** minimum elong

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Earth dist. 3°**♀**40'14 17.57895 AU 9°**M**49'15 18.09792 AU -963 Jun 19 j 09:05 -955 Jul 27 j 00:25 direct 1°**£**36'26 direct 7°M47'08 6°**2**01'12 0°35'54 -963 Oct 08 j 06:05 -955 Nov 12 j 13:51 11°M59'22 conjunction conjunction 0°13'23 -963 Oct 08 j 06:05 -955 Nov 12 j 13:51 minimum elong 6°**♀**01'12 0°35'54 minimum elong 11°M59'22 0°13'22 -963 Oct 08 j 01:38 6°**≏**00'31 -955 Nov 12 j 09:59 max. Earth dist. 19.60820 AU behind sun begin 11°M58'48 -962 Jan 23 j 07:46 -955 Nov 12 j 17:43 retrograde 10° 218'56 behind sun end 11°M59'56 -962 Apr 08 j 06:00 -955 Nov 13 j 00:47 12°ML01'01 20.13204 AU opposition 8°**₽**18'01 0°38'45 max. Earth dist. -962 Apr 08 j 09:32 min. Earth dist. 8°**≏**17'38 17.63813 AU -954 Jan 06 j 13:48 15°M direct -962 Jun 24 j 11:19 6°**£**14'05 retrograde -954 Feb 28 j 05:13 16° ML10'11-954 Apr 24 j 18:58 15°RM conjunction -962 Oct 13 j 01:07 10°**△**37'26 0°33'39 opposition -954 May 15 j 17:31 14°ML10'10 0°13'01 minimum elong -962 Oct 13 j 01:07 10°**♀**37'26 0°33'38 min. Earth dist. -954 May 15 j 05:17 14°M11'25 18.16591 AU max. Earth dist. -962 Oct 12 j 21:50 10°**♀**36'55 19.66897 AU direct -954 Jul 31 j 20:31 12°ML09'21 retrograde -961 Jan 28 j 03:54 14°**♀**54'22 -954 Oct 25 j 18:15 15°M opposition -961 Apr 13 j 06:31 12°**♀**53'37 0°36'06 min. Earth dist. -961 Apr 13 j 08:04 12°**♀**53'27 17.70029 AU conjunction -954 Nov 17 i 01:45 16°**M**₊19'58 0°10'07 direct -961 Jun 29 j 11:26 10°**♀**50'07 minimum elong -954 Nov 17 i 01:45 16°M19'58 0°10'06 behind sun begin -954 Nov 16 j 20:27 16°ML19'11 conjunction -961 Oct 17 i 19:29 15° № 12'00 0°31'11 behind sun end -954 Nov 17 i 07:03 16°M20'45 minimum elong -961 Oct 17 i 19:29 15°**♀**12'00 0°31'11 max. Earth dist. -954 Nov 17 i 14:35 16°ML21'54 20.20025 AU -961 Oct 17 j 19:07 max. Earth dist. 15°**♀**11'57 19.73226 AU retrograde -953 Mar 04 i 18:43 20°M29'55 retrograde -960 Feb 01 j 23:32 19°**£**28'06 opposition -953 May 20 j 12:29 18°M29'58 0°09'21 opposition -960 Apr 17 j 06:42 17°**≏**27'31 0°33'15 min. Earth dist. -953 May 19 j 23:18 18°M31'19 18.23452 AU -960 Apr 17 j 06:12 17°**2**27'34 17.76440 AU -953 Aug 05 j 12:21 min. Earth dist. direct 16°M29'31 -960 Jul 03 j 12:54 direct 15°**£**24'28 -953 Nov 21 j 12:52 20°M38'33 0°06'50 conjunction -960 Oct 21 j 12:44 19°**2**44'49 0°28'33 -953 Nov 21 j 12:52 0°06'49 conjunction minimum elong 20°M38'33 -960 Oct 21 j 12:44 -953 Nov 21 j 06:46 19°**≏**44'49 0°28'33 behind sun begin 20°M37'39 minimum elong -953 Nov 21 j 18:58 -960 Oct 21 j 13:34 19°**£**44'56 19.79717 AU behind sun end 20°M39'27 max. Earth dist. -953 Nov 22 j 03:41 -959 Feb 05 j 18:14 24°**♀**00'05 max. Earth dist. 20°M40'47 20.26914 AU retrograde 21°**♀**59'38 0°30'13 -959 Apr 22 j 06:23 -952 Mar 08 j 10:09 opposition retrograde 24°M47'39 -952 May 24 j 06:40 min. Earth dist. -959 Apr 22 j 04:16 21°**♀**59'51 17.83002 AU opposition 22°M47'48 0°05'40 direct -959 Jul 08 j 11:32 19°**♀**57'00 min. Earth dist. -952 May 23 j 14:31 22°M49'26 18.30356 AU direct -952 Aug 09 j 06:29 20° ML 47'44-959 Oct 26 j 05:19 conjunction 24°**2**15'47 0°25'45 minimum elong -959 Oct 26 j 05:19 24°**♀**15'47 0°25'44 conjunction -952 Nov 24 j 23:05 24°ML55'13 0°03'32 max. Earth dist. -959 Oct 26 j 08:43 24°**£**16'18 19.86329 AU minimum elong -952 Nov 24 j 23:06 24°M55'13 0°03'30 retrograde -958 Feb 10 j 12:23 28°**♀**30'10 behind sun begin -952 Nov 24 j 16:36 24°M54'16 -958 Apr 27 j 05:16 26°**2**29'52 0°27'00 behind sun end -952 Nov 25 j 05:35 24° M $_{56}$ ' $_{10}$ opposition -958 Apr 27 i 00:49 -952 Nov 25 i 15:58 24°M 57'45 20.33822 AU min. Earth dist. 26°**2**30'19 17.89641 AU max. Earth dist. -958 Jul 13 j 11:28 -951 Mar 12 j 22:46 direct 24°**₽**27'38 retrograde 29°ML03'32 -951 May 28 i 07:19 min. Earth dist. 27°ML05'30 18.37272 AU -958 Oct 30 i 20:50 28°**△**44'48 0°22'48 -951 May 29 i 00:16 conjunction opposition 27°ML03'47 0°01'59 -958 Oct 30 i 20:50 minimum elong 28°**△**44'48 0°22'49 direct -951 Aug 13 j 20:36 25°ML04'07 max. Earth dist. -958 Oct 31 i 01:30 28°**△**45'31 19.92995 AU -958 Nov 20 i 11:07 0° M conjunction -951 Nov 29 i 08:45 29°M10'06 0°00'09 minimum elong retrograde -957 Feb 15 j 05:16 2°M58'19 -951 Nov 29 i 08:45 29°ML10'06 0°00'09 -957 May 02 j 03:32 0°M58'06 0°23'39 -951 Nov 29 i 02:19 opposition behind sun begin 29°ML09'10 -957 May 01 j 21:53 -951 Nov 29 i 15:11 min. Earth dist. 0°M58'41 17.96331 AU behind sun end 29°M11'03 -957 May 26 j 14:45 -951 Nov 30 j 03:13 30°R<u>Ω</u> max. Earth dist. 29°M12'52 20.40725 AU -951 Dec 13 j 07:12 direct -957 Jul 18 j 08:09 28°**£**56'14 0°⊀ -957 Sep 06 j 15:59 0°M desc. node -951 Dec 15 j 01:59 0°**х**¹06′17 retrograde -950 Mar 17 j 13:02 3°**х** 17′38 -957 Nov 04 j 11:30 3°M11'47 0°19'45 opposition -950 Jun 02 j 16:44 1° ₹ 18'01 0°-1'-40 conjunction -957 Nov 04 j 11:30 min. Earth dist. -950 Jun 01 j 21:09 1°**尽**20′00 18.44140 AU minimum elong 3°**M**₊11'47 0°19'44 -957 Nov 04 j 18:29 -950 Jul 07 j 17:11 max. Earth dist. 3°ML12'51 19.99700 AU 30°RML -956 Feb 19 j 22:02 29°M18'45 retrograde 7°M24'24 direct -950 Aug 18 j 13:04 opposition -956 May 06 j 00:55 5°M24'16 0°20'11 -950 Sep 27 j 21:45 0°⊀ min. Earth dist. -956 May 05 j 16:40 5°**M**25′07 18.03037 AU direct -956 Jul 22 j 06:11 3°M22'46 conjunction -950 Dec 03 j 17:45 3°**∡**123'19 0°-3'-12 minimum elong -950 Dec 03 j 17:46 3°**∡**°23′19 0°03'14

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -950 in astronomical counting style is the year 951 BCE in historical counting style. -950 Dec 03 j 11:16 3°**∡**¹22'23 -943 Dec 31 i 19:05 behind sun begin conjunction 2°**る**14'25 0°-24'-22 -950 Dec 04 i 00:16 minimum elong behind sun end 3°**х** 24′16 -943 Dec 31 j 19:05 2°る14'25 0°24'24 max. Earth dist. -950 Dec 04 i 14:03 3°**尽**26'21 20.47535 AU max. Earth dist. -942 Jan 01 j 20:59 2°る18'11 20.87455 AU -949 Mar 22 j 01:03 7°**∡**30'07 -942 Apr 20 j 04:27 6°**る**17'03 retrograde retrograde -949 Jun 07 j 08:45 -942 Jul 06 j 02:36 5°**∡**30'38 0°-5'-18 4°る20'33 18.89596 AU opposition min. Earth dist. -949 Jun 06 j 12:49 5°**∡**³32'38 -942 Jul 07 j 04:36 4°**る**17'57 min. Earth dist. 18.50891 AU opposition 0°-28'-24 2°**පි**21'00 -949 Aug 23 j 01:44 -942 Sep 21 j 09:44 direct 3°**х** 31′46 direct 7°**∡**34'56 0°-6'-27 -949 Dec 08 j 02:05 -941 Jan 05 j 00:31 6°る16'15 0°-26'-57 conjunction conjunction -949 Dec 08 j 02:04 -941 Jan 05 j 00:31 minimum elong 7°**∡**³34'56 0°06'29 minimum elong 6°る16'15 0°26'59 -949 Dec 07 j 19:55 -941 Jan 06 j 03:32 behind sun begin 7°**х** 34′03 max. Earth dist. 6°る20'10 20.91580 AU -949 Dec 08 j 08:14 7°**∡**³35′50 -941 Apr 24 j 11:37 10°る18'27 behind sun end retrograde -949 Dec 08 j 23:30 -941 Jul 11 j 15:00 8°る19'20 0°-31'-10 max. Earth dist. 7°**≯**38'07 20.54202 AU opposition -948 Mar 25 j 13:56 -941 Jul 10 j 13:25 retrograde 11°**∡**′41′03 min. Earth dist. 8°る21'53 18.93543 AU opposition -948 Jun 10 j 23:55 9°**∡**¹41'41 0°-8'-53 direct -941 Sep 25 j 17:49 6°る22'31 min. Earth dist. -948 Jun 10 j 01:40 9°**∡¹**43'55 18.57456 AU -940 Jan 09 j 05:27 direct -948 Aug 26 j 16:34 7°**х¹**43′12 conjunction 10°る16'56 0°-29'-23 -940 Jan 09 j 05:27 minimum elong 10°る16'56 0°29'25 conjunction -948 Dec 11 j 10:01 11°**∡**¹45'03 0°-9'-39 max. Earth dist. -940 Jan 10 j 08:27 10°る20'50 20.95356 AU -948 Dec 11 j 10:01 minimum elong 11°**∡**¹45′03 0°09'41 retrograde -940 Apr 27 j 21:28 14°**る**18'46 behind sun begin -948 Dec 11 j 04:36 11°**∡**¹44'16 min. Earth dist. -940 Jul 13 j 21:56 12°る22'17 18.97157 AU behind sun end -948 Dec 11 i 15:27 11°**∡**¹45'50 opposition -940 Jul 15 i 00:43 12°**る**19'36 0°-33'-46 max. Earth dist. -948 Dec 12 j 09:04 11°**∡**′48′28 20.60639 AU direct -940 Sep 29 j 01:50 10°る22'56 retrograde -947 Mar 30 i 00:59 15°**₹**50'30 opposition -947 Jun 15 i 14:33 13°**₹**51'14 0°-12'-24 conjunction -939 Jan 12 j 10:21 14°**る**16'37 0°-31'-40 min. Earth dist. -947 Jun 14 i 16:19 13°**₹**′53'29 18.63769 AU minimum elong -939 Jan 12 i 10:21 14°**ප**16'37 0°31'42 direct -947 Aug 31 j 04:17 11°**х** 53′07 max. Earth dist. -939 Jan 13 j 14:28 14°る20'40 20.98792 AU retrograde -939 May 02 j 03:50 18°る18'08 -947 Dec 15 j 17:26 15°**х** 53'42 0°-12'-47 min. Earth dist. -939 Jul 18 j 07:32 16°る21'36 19.00436 AU conjunction -947 Dec 15 j 17:26 -939 Jul 19 j 09:50 0°-36'-12 minimum elong 15°**х** 53′42 0°12'49 opposition 16°る18'59 -947 Dec 15 j 13:17 -939 Oct 03 j 08:22 behind sun begin 15°**₹**53'06 14°る22'27 direct -947 Dec 15 j 21:35 behind sun end 15°**∡** 54'18 -947 Dec 16 j 17:02 15°**∡**757'11 20.66799 AU -938 Jan 16 j 15:02 18°る15'29 0°-33'-47 max. Earth dist. conjunction -946 Apr 03 j 12:57 -938 Jan 16 j 15:02 18°る15'29 0°33'48 19°**х** 58'32 minimum elong retrograde -946 Jun 19 j 04:15 -938 Jan 17 j 18:51 18°る19'29 21.01911 AU 18°**✗**01'46 18.69758 AU max. Earth dist. min. Earth dist. -946 Jun 20 j 04:19 -938 May 06 j 13:15 22°る16'46 17°**₹**'59'22 0°-15'-50 opposition retrograde -946 Sep 04 j 16:57 -938 Jul 23 j 18:25 16°**х** 01′33 20°る17'37 0°-38'-27 direct opposition min. Earth dist. -938 Jul 22 j 15:16 20°る20'20 19.03388 AU -938 Oct 07 j 14:55 conjunction -946 Dec 20 j 00:31 20°**₹**00'57 0°-15'-50 direct 18°**る**21'13 -946 Dec 20 j 00:31 minimum elong 20°**∡**00'57 0°15'52 -946 Dec 19 j 23:02 -937 Jan 20 j 19:39 22°る13'45 0°-35'-44 behind sun begin 20°**х** 00′44 conjunction behind sun end -946 Dec 20 j 01:59 20°**х** 01′10 minimum elong -937 Jan 20 j 19:39 22°る13'45 0°35'46 max. Earth dist. -946 Dec 21 j 01:18 20°**✗**04'36 20.72585 AU max. Earth dist. -937 Jan 22 j 00:19 22°る17'52 21.04674 AU retrograde -945 Apr 07 j 22:32 24°**₹**05'10 retrograde -937 May 10 j 19:35 26°る14'51 -945 Jun 24 j 17:27 22°**х** 06'04 0°-19'-10 min. Earth dist. -937 Jul 27 j 00:05 24°る18'22 19.05973 AU opposition -945 Jun 23 i 17:44 22°**尽**08'27 18.75352 AU -937 Jul 28 i 02:36 24°**る**15'43 0°-40'-30 min. Earth dist. opposition -945 Sep 09 i 03:46 -937 Oct 11 j 20:27 direct 20°**х** 08'33 direct 22°る19'28 -945 Dec 24 i 07:09 24°**x**¹06'48 0°-18'-48 -936 Jan 25 i 00:14 26°**ප**11'33 0°-37'-31 conjunction conjunction -945 Dec 24 i 07:08 -936 Jan 25 i 00:14 minimum elong 24°**₹**06'48 0°18'50 minimum elong 26°**ප**11'33 0°37'32 -945 Dec 25 i 08:01 max. Earth dist. 24° ₹ 10'27 20.77974 AU max. Earth dist. -936 Jan 26 i 04:16 26°る15'34 21.07084 AU retrograde -944 Apr 11 j 09:41 28°**√**10′28 -936 Apr 21 j 08:59 0°**≈** min. Earth dist. -944 Jun 27 j 04:41 26° ₹13'55 18.80528 AU retrograde -936 May 14 j 04:27 0°≈12'33 30°R₹ -944 Jun 28 i 05:55 26°**х** 11′24 -936 Jun 06 i 06:27 opposition 0°-22'-23 -944 Sep 12 j 14:40 min. Earth dist. -936 Jul 30 j 07:24 28°る16'08 19.08190 AU direct 24°**х** 14′06 -936 Jul 31 j 10:24 opposition 28°る13'27 0°-42'-22 conjunction -944 Dec 27 j 13:17 28°**×**11'17 0°-21'-39 direct -936 Oct 15 j 01:50 26°る17'19 -944 Dec 27 j 13:17 minimum elong 28°**∡**11'17 0°21'40 -935 Jan 25 j 13:38 0°≈ max. Earth dist. -944 Dec 28 j 15:15 28°**✗**15′04 20.82923 AU -943 Jan 28 j 16:09 0°궁 -935 Jan 28 j 04:55 0°≈09'04 0°-39'-7 conjunction retrograde -943 Apr 15 j 18:07 2°る14'25 -935 Jan 28 j 04:55 minimum elong 0°≈09'04 0°39'09 -943 Jul 02 j 17:47 -935 Jan 29 j 09:31 opposition 0°る15'21 0°-25'-28 max. Earth dist. 0°≈13'09 21.09086 AU -943 Jul 01 j 17:00 min. Earth dist. 0°る17'50 18.85265 AU retrograde -935 May 18 j 11:28 4°≈10′00 -943 Jul 09 j 03:45 30°R.✓ opposition -935 Aug 04 j 17:55 2°≈10'56 0°-44'-2

min. Earth dist.

direct

-935 Aug 03 j 15:53

-935 Oct 19 j 06:41

2°≈13'32 19.09972 AU

0°≈14'56

direct

-943 Sep 17 j 00:21

-943 Nov 20 j 23:49

28°**₹**18'15

0°궁

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -934 in astronomical counting style is the year 935 BCE in historical counting style. -934 Feb 01 i 09:48 4°≈06'25 0°-40'-32 min. Earth dist. -927 Sep 05 i 03:47 3°¥53'33 19.05069 AU conjunction minimum elong -934 Feb 01 i 09:48 4°≈06'25 0°40'34 direct -927 Nov 19 j 19:15 1°**)**55'10 4°≈10'20 21.10646 AU max. Earth dist. -934 Feb 02 j 13:15 -934 May 22 j 19:58 -926 Mar 05 j 10:18 5°\(\)47'41 0°-44'-33 retrograde 8°≈07'22 conjunction 6°≈10'55 19.11291 AU -934 Aug 07 j 23:00 -926 Mar 05 j 10:18 5°**)**(47'41 0°44'34 min. Earth dist. minimum elong -934 Aug 09 j 00:55 -926 Mar 06 j 05:13 5°**升**50′22 21.03689 AU opposition 6°**≈**08'19 0°-45'-29 max. Earth dist. -934 Oct 23 j 11:33 -926 Jun 24 j 12:46 9°**)**50'13 direct 4°≈12'23 retrograde -926 Sep 09 j 10:33 7°**¥**52'06 19.02280 AU min. Earth dist. 8°≈03'45 0°-41'-46 -933 Feb 05 j 14:55 -926 Sep 10 j 03:28 conjunction opposition 7°**¥**50′23 0°-48'-59 -933 Feb 05 j 14:55 minimum elong 8°≈03'45 0°41'47 direct -926 Nov 23 j 23:24 5°**¥**53'36 -933 Feb 06 j 18:24 max. Earth dist. 8°≈07'40 21.11699 AU -933 May 27 j 03:07 -925 Mar 09 j 18:01 9°**){**46'41 0°-44'-5 retrograde 12°≈04'44 conjunction -933 Aug 12 j 07:16 -925 Mar 09 j 18:01 0°44'07 min. Earth dist. 10°≈08'10 19.12076 AU minimum elong 9°**)** 46'41 opposition -933 Aug 13 j 07:53 10°**≈**05'42 0°-46'-44 max. Earth dist. -925 Mar 10 j 12:30 9°**)**49'18 21.00717 AU direct -933 Oct 27 j 15:44 8°≈09'49 retrograde -925 Jun 28 j 20:59 13°**)**49'38 opposition -925 Sep 14 j 09:28 11°**)(**49'41 0°-48'-22 conjunction -932 Feb 09 j 20:08 12°≈01'05 0°-42'-48 min. Earth dist. -925 Sep 13 j 17:55 11°\\$51'16 18.99134 AU minimum elong -932 Feb 09 j 20:08 12°**≈**01'05 0°42'49 direct -925 Nov 28 j 04:19 9°**)** 52'44 max. Earth dist. -932 Feb 10 j 22:03 12°≈04'47 21.12215 AU -932 Apr 08 j 18:13 15°≈ conjunction -924 Mar 13 j 02:05 13°**)** € 46′26 0°-43'-25 retrograde -932 May 30 j 12:01 16°≈02'12 minimum elong -924 Mar 13 j 02:06 13°**)** (46′26 0°43'25 -932 Jul 22 i 22:47 15°R≈ max. Earth dist. -924 Mar 13 j 18:24 13°**)** 48'45 20.97419 AU opposition -932 Aug 16 j 14:39 14°≈03'07 0°-47'-45 retrograde -924 Jul 02 i 07:06 17°**)**(49'55 min. Earth dist. -932 Aug 15 j 14:33 14°≈05'32 19.12304 AU opposition -924 Sep 17 i 15:36 15°**)**(49'51 0°-47'-31 direct -932 Oct 30 i 20:44 12°≈07'13 min. Earth dist. -924 Sep 17 j 01:10 15°**)** 51'20 18.95669 AU -931 Jan 26 j 18:59 15°≈ direct -924 Dec 01 j 08:52 13°¥ 52'42 -931 Feb 13 i 01:51 15°≈58'30 0°-43'-37 -923 Mar 17 j 11:03 17°**¥**47'10 0°-42'-32 conjunction conjunction -931 Feb 13 j 01:51 15°≈58'30 0°43'38 minimum elong -923 Mar 17 j 11:03 17°**)**47'10 0°42'34 minimum elong -931 Feb 14 j 03:24 -923 Mar 18 j 02:44 max. Earth dist. 16°≈02'08 21.12137 AU max. Earth dist. 17°**)**(49'24 20.93786 AU -931 Jun 03 j 19:06 -923 Jul 06 j 16:09 19°≈59'44 21°\ 51'11 retrograde retrograde -931 Aug 20 j 21:07 -923 Sep 21 j 21:47 19° **★**51'03 0°-46'-26 opposition 18°≈00'35 0°-48'-33 opposition -923 Sep 21 j 08:53 -931 Aug 19 j 22:36 19°**¥**52'23 18.91867 AU min. Earth dist. 18°≈02'51 19.11924 AU min. Earth dist. -931 Nov 04 j 00:37 -923 Dec 05 j 13:45 16°≈04'37 17°**)** 53'44 direct direct -930 Feb 17 j 07:46 21°**)**49'02 0°-41'-27 19°≈55'59 0°-44'-14 -922 Mar 21 j 20:34 conjunction conjunction -930 Feb 17 j 07:46 -922 Mar 21 j 20:34 21°**)**49'02 0°41'27 minimum elong 19°**≈**55'59 0°44'16 minimum elong max. Earth dist. -930 Feb 18 j 07:21 19°≈59'21 21.11474 AU max. Earth dist. -922 Mar 22 j 09:42 21°\cdot\50'54 20.89837 AU retrograde -930 Jun 08 j 04:01 23°≈57'23 retrograde -922 Jul 11 j 03:32 25°\ 53'41 min. Earth dist. -930 Aug 24 j 05:46 22°≈00'18 19.10967 AU opposition -922 Sep 26 j 04:21 23°\£53'29 0°-45'-7 opposition -930 Aug 25 j 03:28 21°≈58′07 0°-49'-6 min. Earth dist. -922 Sep 25 j 16:53 23°\ 54'40 18.87748 AU direct -930 Nov 08 j 05:43 20°≈02'03 direct -922 Dec 09 j 19:18 21°**¥**55′58 -929 Feb 21 j 13:51 23°≈53'34 0°-44'-38 -921 Mar 26 j 06:45 25°**)** 52'12 0°-40'-8 conjunction conjunction -929 Feb 21 j 13:51 23°≈53'34 0°44'39 -921 Mar 26 j 06:45 25°\ 52'12 0°40'10 minimum elong minimum elong -929 Feb 22 i 13:03 -921 Mar 26 i 19:09 25°**)** 53′59 20.85541 AU max. Earth dist. 23°≈56'52 21.10233 AU max. Earth dist. -929 Jun 12 j 11:13 -921 Jul 15 i 13:40 29°**)** 57'32 retrograde 27°≈55'09 retrograde -929 Aug 29 i 09:40 -921 Sep 30 j 11:14 27°**)** 57'16 0°-43'-34 opposition 25°≈55'46 0°-49'-26 opposition -929 Aug 28 j 13:28 -921 Sep 30 i 01:27 min. Earth dist. 25°≈57'48 19.09457 AU min. Earth dist. 27°**)** 58'17 18.83266 AU direct -929 Nov 12 j 09:58 23°≈59'33 direct -921 Dec 14 j 00:28 25°¥ 59'34 -928 Feb 25 j 20:15 27°≈51'18 0°-44'-49 -920 Mar 29 i 17:49 29°**H** 56'49 0°-38'-38 conjunction conjunction minimum elong -928 Feb 25 j 20:15 27°≈51'18 0°44'51 -920 Mar 29 j 17:49 29°\ 56'49 0°38'39 minimum elong -928 Feb 26 j 17:35 27°≈54'19 21.08492 AU -920 Mar 30 j 03:17 max. Earth dist. max. Earth dist. 29°**₭**58'10 20.80887 AU -928 Apr 05 j 14:12 -920 Mar 30 j 16:01 $0^{\circ}\Upsilon$ 0°**∀** -928 Jun 15 j 20:00 -920 Jul 19 j 02:08 4°Υ02'52 retrograde 1° # 53'09 retrograde -928 Aug 30 j 00:18 30°R≈ opposition -920 Oct 03 j 18:23 2°Y'02'32 0°-41'-47 -928 Sep 01 j 15:41 29°≈53'35 0°-49'-31 min. Earth dist. -920 Oct 03 j 10:32 2°Υ03'20 18.78417 AU opposition min. Earth dist. -928 Aug 31 j 20:22 29°≈55'33 19.07483 AU direct -920 Dec 17 j 07:24 0°Υ04'35 -928 Nov 15 j 14:34 27°≈57'11 direct -927 Jan 26 j 21:08 0°**)**€ -919 Apr 03 j 05:54 4°Υ02'57 0°-36'-54 conjunction minimum elong -919 Apr 03 j 05:54 4°**Υ**02'57 0°36'55 -927 Mar 01 j 03:06 conjunction 1°**¥**49'17 0°-44'-47 max. Earth dist. -919 Apr 03 j 14:09 4°**Υ**04'08 20.75827 AU -919 Jul 23 j 13:13 minimum elong -927 Mar 01 j 03:06 1°**)**49'17 0°44'49 retrograde 8°**Y**09'43 max. Earth dist. -927 Mar 02 j 00:04 1°**¥**52'16 21.06290 AU opposition -919 Oct 08 j 02:00 6°**Ƴ**09'17 0°-39'-47 retrograde -927 Jun 20 j 03:45 5°**)** 51′26 min. Earth dist. -919 Oct 07 j 20:03 6°Υ09'54 18.73139 AU opposition -927 Sep 05 j 21:38 3°**升**51'44 0°-49'-22 -919 Dec 21 j 13:58 4°Υ11'05 direct

Planetary Phenomena of Uranus from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, Attention, astronomical year style is used: The year -918 in astronomical counting style is the year 919 BCE in historical counting style. -918 Apr 07 j 18:34 8°Υ'10'35 0°-34'-59 conjunction conjunction -910 May 13 i 05:11 12°**8**07'18 0°-13'-26 -918 Apr 07 i 18:34 minimum elong 8°Υ10'35 0°35'00 minimum elong -910 May 13 i 05:11 12°**8**07'18 0°13'26 -918 Apr 07 j 23:26 max. Earth dist. 8°**Y**11'17 20.70347 AU behind sun begin -910 May 13 j 01:31 12°**8**06'46 -918 Jul 28 j 01:57 12° Y 18'07 -910 May 13 j 08:50 12°**8**07'49 retrograde behind sun end -918 Oct 12 j 10:01 10°**Y**17'33 0°-37'-33 max. Earth dist. -910 May 12 j 16:56 12°805'30 20.16967 AU opposition -910 Jul 05 j 09:30 -918 Oct 12 j 06:15 10°**Υ**17'56 18.67448 AU min. Earth dist. 15°8 -918 Dec 25 j 22:08 8°**Y**19'00 -910 Aug 31 j 17:52 16°**8**21'18 direct retrograde -910 Oct 29 j 16:35 15°₹**8** -917 Apr 12 j 08:11 12°Υ19'43 0°-32'-52 -910 Nov 14 j 19:19 14°**8**19'24 0°-13'-3 conjunction opposition -917 Apr 12 j 08:11 -910 Nov 15 j 05:55 minimum elong 12°**Y**19'43 0°32'52 min. Earth dist. 14°**8**18'16 18.13500 AU -917 Apr 12 j 11:45 max. Earth dist. 12°**Y**20'14 20.64454 AU direct -909 Jan 28 j 13:51 12°**8**17'33 -917 Aug 01 j 14:01 16°**Y**′28′00 -909 Apr 22 j 08:22 15°8 retrograde -917 Oct 16 j 18:25 14°**Y**27'17 0°-35'-6 opposition -917 Oct 16 j 16:26 min. Earth dist. 14°**Y**27′29 18.61359 AU conjunction -909 May 18 j 01:23 16°**8**29'46 0°-10'-9 -917 Dec 30 j 06:44 direct 12°Y28'23 minimum elong -909 May 18 j 01:23 16°**8**29'46 0°10'11 behind sun begin -909 May 17 j 20:02 16°**8**28'59 conjunction -916 Apr 15 j 22:22 16°**Ƴ**30′20 0°-30'-33 behind sun end -909 May 18 j 06:44 16°**8**30'32 minimum elong -916 Apr 15 j 22:22 16°**Ƴ**30′20 0°30'34 max. Earth dist. -909 May 17 j 12:23 16°**8**27'51 20.10083 AU max. Earth dist. -916 Apr 15 j 22:29 16°**Y**30'21 20.58204 AU retrograde -909 Sep 05 j 12:01 20°844'38 retrograde -916 Aug 05 j 02:39 20° Y 39'24 opposition -909 Nov 19 j 08:12 18°**8**42'40 0°-9'-22 opposition -916 Oct 20 j 03:17 18°**Ƴ**38'29 0°-32'-28 min. Earth dist. -909 Nov 19 j 19:34 18°**8**41'27 18.06660 AU min. Earth dist. -916 Oct 20 i 03:36 18°**Ƴ**38′27 18.54947 AU direct -908 Feb 02 i 04:38 16°840'27 direct -915 Jan 02 j 15:48 16°**Y**39'10 conjunction -908 May 21 j 22:23 20°**8**54'18 0°-6'-48 conjunction -915 Apr 20 j 13:39 20°**Ƴ**42'27 0°-28'-4 minimum elong -908 May 21 j 22:24 20°**8**54'18 0°06'48 minimum elong -915 Apr 20 i 13:39 20°**Y**′42′27 0°28'04 behind sun begin -908 May 21 j 16:06 20°853'23 -915 Apr 20 j 12:35 max. Earth dist. 20°**Y**42′18 20.51648 AU behind sun end -908 May 22 j 04:42 20°855'13 retrograde -915 Aug 09 j 16:02 24°Y52'16 max. Earth dist. -908 May 21 j 06:30 20°851'56 20.03293 AU opposition -915 Oct 24 j 12:26 22°**Y**51'11 0°-29'-38 retrograde -908 Sep 09 j 05:27 25°810'04 -915 Oct 24 j 14:21 22°Υ′50'59 18.48262 AU -908 Nov 22 j 22:03 min. Earth dist. opposition 23°**8**08'03 0°-5'-35 -914 Jan 07 j 02:21 20°**Y**51′27 min. Earth dist. -908 Nov 23 j 11:51 23°806'34 17.99921 AU direct -907 Feb 05 j 18:47 21°**8**05'28 direct -914 Apr 25 j 05:28 24°Y56'05 0°-25'-25 conjunction -914 Apr 25 j 05:28 -907 May 26 j 20:27 25°**8**20'59 0°-3'-22 24°Υ56'05 0°25'26 minimum elong conjunction -914 Apr 25 j 01:04 24°**Υ**55'27 20.44871 AU -907 May 26 j 20:28 25°**8**20'59 0°03'22 max. Earth dist. minimum elong -914 Aug 14 j 04:57 29°Y06'43 -907 May 26 j 13:44 25°**8**20'00 retrograde behind sun begin -914 Oct 28 j 22:15 27°**Υ**05'25 0°-26'-37 -907 May 27 j 03:13 25°**8**21'58 opposition behind sun end min. Earth dist. -914 Oct 29 j 02:22 27°**Υ**04'59 18.41408 AU max. Earth dist. -907 May 26 j 03:34 25°818'28 19.96593 AU -907 Sep 14 j 01:27 direct -913 Jan 11 j 12:24 25°**Y**05'14 retrograde 29°**8**37'36 -907 Nov 27 j 12:32 opposition 27°835'34 0°-1'-44 -913 Apr 29 j 22:06 29°Υ11'18 0°-22'-37 conjunction min. Earth dist. -907 Nov 28 j 03:08 27°833'59 17.93259 AU minimum elong -913 Apr 29 j 22:06 29°**Y**11'18 0°22'37 direct -906 Feb 10 j 11:43 25°**8**32'39 max. Earth dist. -913 Apr 29 j 16:51 29°Υ10'33 20.37948 AU asc. node -906 May 13 j 21:09 28°**8**45'43 -913 May 13 j 20:41 0° 8 retrograde -913 Aug 18 j 19:42 3°**8**22'45 conjunction -906 May 31 j 19:18 29°849'48 0°00'11 -913 Nov 02 j 08:34 1°**8**21'16 0°-23'-26 -906 May 31 i 19:19 29°**8**49'48 0°00'11 opposition minimum elong -913 Nov 02 j 13:54 1°820'42 18.34433 AU -906 May 31 i 12:36 29°**8**48'49 min. Earth dist. behind sun begin -913 Dec 07 i 09:44 -906 Jun 01 i 02:02 29°850'46 30°R℃ behind sun end -912 Jan 16 j 00:33 29°Y20'40 -906 May 30 j 23:41 29°846'51 19.89963 AU direct max. Earth dist. -912 Feb 24 i 01:03 -906 Jun 03 i 15:11 0°8 $\Pi^{\circ}0$ -906 Sep 18 i 19:57 retrograde 4°**Ⅱ**07'17 -906 Dec 02 i 04:06 -912 May 03 i 15:35 3°828'11 0°-19'-41 opposition 2°II05'11 0°02'08 conjunction -912 May 03 j 15:35 3°**8**28'11 0°19'41 min. Earth dist. -906 Dec 02 j 21:13 2°**I**103'20 17.86680 AU minimum elong -912 May 03 j 07:09 3°**8**26'57 20.30950 AU direct -905 Feb 15 j 03:24 0°**I**101′54 max. Earth dist. -912 Aug 22 j 09:47 7°840'28 retrograde -912 Nov 05 j 19:26 -905 Jun 05 j 18:58 4°**I**I20'40 0°03'45 opposition 5°**8**38'49 0°-20'-6 conjunction -905 Jun 05 j 18:58 4°**Ⅱ**20'40 0°03'47 min. Earth dist. -912 Nov 06 j 02:58 5°**8**38'01 18.27428 AU minimum elong -905 Jun 05 j 12:15 direct -911 Jan 19 j 11:49 3°**8**37'45 behind sun begin 4°**Ⅱ**19'41 behind sun end -905 Jun 06 j 01:41 4°**Ⅱ**21'40 4°**Ⅱ**17'31 19.83420 AU -911 May 08 j 10:07 7°**8**46'49 0°-16'-36 -905 Jun 04 j 22:05 conjunction max. Earth dist. -911 May 08 j 10:07 7°**8**46'49 0°16'38 retrograde -905 Sep 23 j 17:45 8°II38'58 minimum elong -911 May 08 j 00:52 7°**8**45'28 20.23940 AU -905 Dec 06 j 20:21 max. Earth dist. opposition 6°**Ⅲ**36'49 0°06'03 -911 Aug 27 j 02:09 11°**8**59'56 -905 Dec 07 j 14:07 retrograde min. Earth dist. 6°**I**34'54 17.80174 AU -904 Feb 19 j 22:46 opposition -911 Nov 10 j 06:59 9°**8**58'09 0°-16'-39 direct 4°**Ⅲ**33'10 min. Earth dist. -911 Nov 10 j 15:27 9°**8**57'15 18.20427 AU direct -910 Jan 24 j 01:15 7°856'42 -904 Jun 09 j 19:30 8°**Ⅱ**53'31 0°07'15 conjunction

minimum elong

-904 Jun 09 j 19:30

8°**Ⅲ**53'31

0°07'16

Attention, astronomi	cal year sty	le is used: T	he year -904 ii	n astronomical o
behind sun begin	-904 Jun	09 j 13:17	8° Ⅱ 52'36	
behind sun end	-904 Jun	10 j 01:43	8° Ⅱ 54'26	
max. Earth dist.	-904 Jun	08 j 20:15	8° Ⅱ 50′00	19.76955 AU
retrograde	-904 Sep	27 j 12:57	13° Ⅱ 12'34	
opposition	-904 Dec	10 j 13:28	11° Ⅱ 10′21	0°09'57
min. Earth dist.	-904 Dec	11 j 09:44	11° Ⅱ 08′09	17.73781 AU
direct	-903 Feb	23 j 16:15	9° Ⅱ 06′18	
conjunction	-903 Jun	14 j 20:42	13° Ⅱ 28'12	0°10'44
minimum elong	-903 Jun	14 j 20:42	13° Ⅱ 28'12	0°10'45
behind sun begin	-903 Jun	14 j 15:34	13° Ⅱ 27′26	
behind sun end	-903 Jun	15 j 01:50	13° Ⅱ 28'57	
max. Earth dist.	-903 Jun	13 j 20:02	13° Ⅱ 24'26	19.70638 AU
retrograde	-903 Oct	02 j 11:47	17° Ⅱ 47'57	
opposition	-903 Dec	15 j 07:18	15° Ⅱ 45'39	0°13'49
min. Earth dist.	-903 Dec	16 j 03:54	15° Ⅱ 43'25	17.67554 AU
direct	-902 Feb	28 j 13:32	13° Ⅱ 41'13	
conjunction	-902 Jun	19 j 22:17	18° Ⅱ 04'35	0°14'10
minimum elong	-902 Jun	19 j 22:17	18° Ⅱ 04'35	0°14'11
behind sun begin	-902 Jun	19 j 19:14	18° Ⅱ 04'07	
behind sun end	-902 Jun	20 j 01:21	18° Ⅲ 05′02	
max. Earth dist.	-902 Jun	18 j 20:13	18° Ⅱ 00'36	19.64510 AU
retrograde	-902 Oct	07 j 07:42	22° II 25'01	
opposition	-902 Dec	20 j 02:00	20° Ⅲ 22'37	0°17'37
min. Earth dist.	-902 Dec	21 j 00:42	20° Ⅲ 20′09	17.61565 AU
direct	-901 Mar	05 j 08:57	18° Ⅱ 17'48	
max. Earth dist.	-901 Jun	23 j 21:02	22° II 38'21	19.58670 AU
conjunction	-901 Jun	25 j 00:28	22° Ⅱ 42'34	0°17'32
minimum elong	-901 Jun	25 j 00:28	22° Ⅱ 42'34	0°17'32
retrograde	-901 Oct	12 j 06:54	27° Ⅱ 03'36	
opposition	-901 Dec	24 j 21:09	25° Ⅱ 01'07	0°21'19
min. Earth dist.	-901 Dec	25 j 19:55	24° Ⅱ 58'38	17.55889 AU
direct	-900 Mar	09 j 08:10	22° II 55'56	
max. Earth dist.	-900 Jun	27 j 23:17	27° Ⅱ 17'43	19.53163 AU
conjunction	-900 Jun	29 j 03:15	27° II 22'02	0°20'47
minimum elong	-900 Jun	29 j 03:14	27° II 22'02	0°20'49
_	-900 Aug	13 j 17:01	0ං ව	
retrograde		16 j 03:18	1°543'36	
-		21 j 11:15	30°R Ⅱ	
opposition		28 j 17:19	29° Ⅱ 41'03	0°24'53

-900 Dec 29 j 17:44 29°**Ц**38'22 17.50591 AU

min. Earth dist.

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style. direct -900 Mar 09 i 08:10 22°**II**55'56 conjunction -893 Aug 03 i 05:05 0°**Ω**31'52 0°38'55 minimum elong max. Earth dist. -900 Jun 27 j 23:17 27°**Ⅱ**17'43 19.53163 AU -893 Aug 03 j 05:05 0°Ω31'52 0°38'56 -893 Nov 19 j 02:41 4°**Ω**55'41 retrograde -900 Jun 29 j 03:15 27°**II**22'02 0°20'47 -892 Jan 31 j 09:14 conjunction 2°**Ω**53'22 0°44'22 opposition -900 Jun 29 j 03:14 27°**II**22'02 0°20'49 -892 Feb 01 j 09:33 minimum elong min. Earth dist. 2°**Ω**50'43 17.28620 AU -900 Aug 13 j 17:01 0ಂತಾ direct -892 Apr 16 j 16:20 0°**Ω**46'44 -900 Oct 16 j 03:18 retrograde 1°9543'36 max. Earth dist. -892 Aug 06 j 06:05 5°**Ω**15'28 19.28044 AU -900 Dec 21 j 11:15 30°R∏ -900 Dec 28 j 17:19 29°II41'03 0°24'53 opposition conjunction -892 Aug 07 j 09:18 5°**Ω**19'45 0°40'36 min. Earth dist. -900 Dec 29 j 17:44 29°**Ⅲ**38'22 17.50591 AU minimum elong -892 Aug 07 j 09:18 5°**Ω**19'45 0°40'37 direct -899 Mar 14 j 05:36 27°**Ⅲ**35'30 retrograde -892 Nov 23 j 04:11 9°**Ω**43'36 -899 May 30 j 22:13 -891 Feb 04 j 10:38 0ಂತಾ opposition 7°**Ω**41'23 0°46'06 -899 Jul 03 j 00:58 -891 Feb 05 j 10:19 max. Earth dist. 1°558'20 19.48084 AU min. Earth dist. 7°**Ω**38'48 17.27688 AU direct -891 Apr 21 j 19:45 5°**Ω**34'45 conjunction -899 Jul 04 j 06:08 2°9502'50 0°23'56 max. Earth dist. -891 Aug 11 j 09:42 10°**Ω**03'41 19.27360 AU minimum elong -899 Jul 04 j 06:08 2°902'50 0°23'56 retrograde -899 Oct 21 j 02:50 6°924'55 conjunction -891 Aug 12 j 13:05 10°**Ω**08'00 0°42'00 opposition -898 Jan 02 j 14:02 4°522'18 0°28'19 minimum elong -891 Aug 12 j 13:05 $10^{\circ}\Omega08'00$ 0°42'00 min. Earth dist. -898 Jan 03 j 14:07 4°9519'39 17.45754 AU retrograde -891 Nov 28 j 04:38 14°**Ω**31'48 direct -898 Mar 19 j 06:46 2°9516'27 opposition -890 Feb 09 j 12:31 12°**Ω**29'39 0°47'30 max. Earth dist. -898 Jul 08 j 04:52 6°€40'29 19.43489 AU min. Earth dist. -890 Feb 10 j 12:05 12°**Ω**27'05 17.27262 AU direct -890 Apr 26 j 23:38 10°**£**23′01 conjunction -898 Jul 09 i 09:32 6°9544'56 0°26'55 minimum elong -898 Jul 09 i 09:32 6°5944'56 0°26'56 conjunction -890 Aug 17 j 16:46 14°**Ω**56′22 0°43'06 retrograde -898 Oct 26 i 00:22 11°907'26 minimum elong -890 Aug 17 i 16:46 14°**Ω**56′22 0°43'07 -897 Jan 07 i 11:36 9°504'47 0°31'34 max. Earth dist. -890 Aug 16 j 14:49 14°Ω52'15 19.27181 AU opposition -897 Jan 08 j 12:39 9°502'02 17.41439 AU -890 Aug 18 j 15:48 15°Ω min Earth dist -897 Mar 24 j 06:18 6°958'41 -890 Dec 03 j 05:46 19°Ω20'00 direct retrograde max. Earth dist. -897 Jul 13 j 07:14 11°523'34 19.39459 AU -889 Feb 14 j 14:31 17°**Ω**17'55 0°48'34 opposition min. Earth dist. -889 Feb 15 j 12:48 17°**Ω**15'30 17.27319 AU -897 Jul 14 j 13:00 -889 May 02 j 04:36 conjunction 11°528'12 0°29'44 direct 15°**Ω**11'20 -897 Jul 14 j 13:00 minimum elong 11°**9**°28'12 0°29'45 -897 Oct 31 j 00:22 -889 Aug 22 j 20:04 19°**Ω**44'35 0°43'54 retrograde 15°951'07 conjunction -896 Jan 12 j 09:46 -889 Aug 22 j 20:04 minimum elong 19°**Ω**44'35 0°43'54 opposition 13°9548'27 0°34'36 -889 Aug 21 j 18:39 -896 Jan 13 j 10:17 max. Earth dist. 19°**Ω**40'34 19.27486 AU min. Earth dist. 13°9545'46 17.37705 AU -889 Dec 08 j 05:25 -896 Mar 28 j 08:19 24°₽08'00 direct 11°9542'08 retrograde -888 Feb 19 j 16:59 22°Ω05'58 0°49'17 opposition conjunction -896 Jul 18 j 16:58 16°9512'37 0°32'22 min. Earth dist. -888 Feb 20 j 15:11 22°Ω03'34 17.27880 AU minimum elong -896 Jul 18 j 16:58 16°9512'37 0°32'22 direct -888 May 06 j 08:50 19°**Ω**59'26 max. Earth dist. -896 Jul 17 j 12:21 16°508'09 19.36013 AU retrograde -896 Nov 03 j 23:47 20°935'50 conjunction -888 Aug 26 j 22:49 24° Ω32'27 0°44'24 -895 Jan 16 j 08:42 18°933'15 0°37'26 minimum elong -888 Aug 26 j 22:49 24°Ω32'27 0°44'25 opposition min. Earth dist. -895 Jan 17 j 09:38 18°930'31 17.34558 AU max. Earth dist. -888 Aug 25 j 22:47 24°**Ω**28'38 19.28306 AU -895 Apr 02 j 09:18 16°9526'48 retrograde -888 Dec 12 j 06:15 $28^{\circ}\Omega55'33$ direct -887 Feb 23 j 19:30 26°**Ω**53'34 0°49'40 opposition -895 Jul 23 i 20:55 20°958'06 0°34'47 -887 Feb 24 i 15:43 26° Ω51'23 17.28948 AU conjunction min. Earth dist. -895 Jul 23 i 20:55 minimum elong 20°958'06 0°34'48 direct -887 May 11 j 14:50 24°**Ω**47'07 -887 Aug 31 j 02:35 -895 Jul 22 j 15:23 max. Earth dist. 20°553'29 19.33174 AU max. Earth dist. 29° Ω16'10 19.29646 AU -895 Nov 09 i 00:40 retrograde 25°521'37 opposition -894 Jan 21 i 08:17 23°519'06 0°40'01 -887 Sep 01 j 01:01 29°Ω19'42 0°44'35 conjunction min. Earth dist. -894 Jan 22 j 08:46 23°516'25 17.32024 AU minimum elong -887 Sep 01 i 01:01 29°Ω19'42 0°44'36 direct -894 Apr 07 j 11:33 -887 Sep 11 j 15:59 0° m 21°9612'33 max. Earth dist. -894 Jul 27 j 21:00 25°5040'11 19.30923 AU retrograde -887 Dec 17 j 05:05 3° m 42'26 -886 Feb 28 j 22:14 opposition 1° m 40'30 0°49'41 -894 Jul 29 j 00:58 conjunction 25°5044'34 0°36'59 min. Earth dist. -886 Mar 01 j 18:06 1° m/38'21 17.30568 AU -894 Jul 29 j 00:58 minimum elong 25°5044'34 0°36'59 -886 Apr 14 j 20:32 30°R€ -894 Oct 27 j 23:31 $0^{\circ}\Omega$ direct -886 May 16 j 19:01 29°**Ω**34'08 -894 Nov 14 j 01:42 $0^{\circ}\Omega 08'16$ -886 Jun 17 j 05:11 retrograde 0° m -894 Dec 01 j 07:18 max. Earth dist. -886 Sep 05 j 05:20 30°R∽ 4° Mp 02'51 19.31556 AU -893 Jan 26 j 08:32 28°905'52 0°42'20 opposition -893 Jan 27 j 08:58 -886 Sep 06 j 02:21 4° Mp 06'10 0°44'27 min. Earth dist. 28°503'12 17.30048 AU conjunction -893 Apr 12 j 13:29 minimum elong direct 25°959'17 -886 Sep 06 j 02:21 4° Mp 06'10 0°44'27 -893 Jul 25 j 18:19 0 $^{\circ}$ Ω retrograde -886 Dec 22 j 05:18 8° Mp 28'27max. Earth dist. -893 Aug 02 j 00:23 0°**Ω**27'21 19.29220 AU opposition -885 Mar 06 j 00:47 6° m 26'33 0°49'22 min. Earth dist. -885 Mar 06 j 18:05 6° Mp 24'42 17.32754 AU

2	nical year style is used: T			//		, ,	e 2
direct	-885 May 22 j 00:52	-	n astronomicai cou	direct	-877 Jun 29 j 20:13	unung style. 11° £ 49'53	
		4° Mp 20'20	10.24025 ATT	direct	-8//Jun 29 j 20:13	11-24953	
max. Earth dist.	-885 Sep 10 j 08:38	8"11048'45	19.34035 AU		077.0 / 10:04.53	160 0 11156	0020140
	005.0 11:02.00	0000 51141	0044101	conjunction	-877 Oct 18 j 04:53	16° Ω 11'56	0°30'48
conjunction	-885 Sep 11 j 03:09	8° m 51'41		minimum elong	-877 Oct 18 j 04:53	16° Ω 11'56	0°30'48
minimum elong	-885 Sep 11 j 03:09	8° m 51'41	0°44'01	max. Earth dist.	-877 Oct 18 j 04:00		19.72919 AU
retrograde	-885 Dec 27 j 03:19	13°M 13'26		retrograde	-876 Feb 02 j 09:20	20° ≏ 28'08	
opposition	-884 Mar 10 j 03:22	11° m 11'38		opposition	-876 Apr 17 j 15:42	18° ≏ 27'35	
min. Earth dist.	-884 Mar 10 j 19:57		17.35536 AU	min. Earth dist.	-876 Apr 17 j 15:48		17.76045 AU
direct	-884 May 26 j 04:13	9° ™ 05'36		direct	-876 Jul 03 j 21:15	16° ≏ 24'32	
max. Earth dist.	-884 Sep 14 j 09:58	13° My 33'25	19.37134 AU				
				conjunction	-876 Oct 21 j 22:19	20° ≏ 45'02	0°28'09
conjunction	-884 Sep 15 j 03:05	13° m 36'07	0°43'17	minimum elong	-876 Oct 21 j 22:19	20° ≙ 45'02	0°28'08
minimum elong	-884 Sep 15 j 03:05	13°№36'07	0°43'16	max. Earth dist.	-876 Oct 21 j 22:29	20° ≏ 45′03	19.79233 AU
retrograde	-884 Dec 31 j 03:19	17° m 57′20		retrograde	-875 Feb 06 j 03:45	25° ഫ 00'23	
opposition	-883 Mar 15 j 05:51	15° m 55'37	0°47'44	opposition	-875 Apr 22 j 15:24	22° ≏ 59'57	0°29'46
min. Earth dist.	-883 Mar 15 j 19:23	15° m 54'10	17.38935 AU	min. Earth dist.	-875 Apr 22 j 13:41	23° ♀ 00'07	17.82432 AU
direct	-883 May 31 j 09:03	13° m 49'50		direct	-875 Jul 08 j 20:45	20° ჲ 57'16	
					·		
conjunction	-883 Sep 20 j 02:17	18° m 19'26	0°42'16	conjunction	-875 Oct 26 j 14:53	25° Ω 16'11	0°25'20
minimum elong	-883 Sep 20 i 02:17	18° m) 19'26		minimum elong	-875 Oct 26 j 14:53	25° Ω 16'11	0°25'20
max. Earth dist.	-883 Sep 19 j 12:21	~	19.40838 AU	max. Earth dist.	-875 Oct 26 j 17:52	25° Ω 16'38	19.85675 AU
retrograde	-882 Jan 05 j 00:57	22° Mp 40'03	17.10030710	retrograde	-874 Feb 10 j 21:58	29° ₽ 30'39	19.00075110
opposition	-882 Mar 20 j 08:16	20° m 38'29	0046126	opposition	-874 Apr 27 j 14:20	27° ⊆ 30'37	0°26'32
min. Earth dist.	,	-		min. Earth dist.	1 3		17.88908 AU
	-882 Mar 20 j 20:40		17.42931 AU		-874 Apr 27 j 10:29		17.88908 AU
direct	-882 Jun 05 j 10:52	18° mp 33'02	10 45122 477	direct	-874 Jul 13 j 20:31	25° £ 27'59	
max. Earth dist.	-882 Sep 24 j 12:00	22° II) 59'36	19.45133 AU				
				conjunction	-874 Oct 31 j 06:29	29° Ω 45'15	0°22'23
conjunction	-882 Sep 25 j 00:40	23° m 01'35		minimum elong	-874 Oct 31 j 06:28	29° ≏ 45'15	0°22'22
minimum elong	-882 Sep 25 j 00:40	23° m 01'35	0°40'58	max. Earth dist.	-874 Oct 31 j 10:38		19.92196 AU
retrograde	-881 Jan 10 j 00:39	27° Mp 21'34			-874 Nov 04 j 06:04	0°M.	
opposition	-881 Mar 25 j 10:07	25° Mp 20'10	0°44'50	retrograde	-873 Feb 15 j 14:19	3° ™ 58'49	
min. Earth dist.	-881 Mar 25 j 19:40	25° m 19'09	17.47488 AU	opposition	-873 May 02 j 12:28	1° M 58'31	0°23'10
direct	-881 Jun 10 j 14:08	23° Mp 15'04		min. Earth dist.	-873 May 02 j 07:12	1° M 59'04	17.95476 AU
					-873 Jul 07 j 01:30	30° Ŗ Ω	
conjunction	-881 Sep 29 j 22:28	27° Mp 42'32	0°39'25	direct	-873 Jul 18 j 17:29	29° ≏ 56'32	
minimum elong	-881 Sep 29 j 22:29	27° Mp 42'32	0°39'24		-873 Jul 30 j 06:17	0° M .	
max. Earth dist.	-881 Sep 29 j 13:08	-	19.49945 AU		,		
	-881 Nov 07 i 03:36	0∘ <u>⊽</u>		conjunction	-873 Nov 04 j 21:12	4° M .12'10	0°19'19
retrograde	-880 Jan 14 j 22:06	2° ≏ 01'49		minimum elong	-873 Nov 04 j 21:12	4°M12'10	
opposition	-880 Mar 29 j 12:04	0° ⊆ 00'37	0°42'56	max. Earth dist.	-873 Nov 05 j 04:03		19.98808 AU
оррозиюн	-880 Mar 29 j 17:58	30°R, Mb	0 1230	retrograde	-872 Feb 20 j 07:19	8°M24'48	19.90000110
min. Earth dist.	-880 Mar 29 j 20:19		17.52523 AU	opposition	-872 May 06 j 09:56	6°M24'34	0°19'42
direct	,	29 m 55'55	17.32323 AU	min. Earth dist.	, ,		18.02120 AU
direct	-880 Jun 14 j 15:06				-872 May 06 j 02:05		16.02120 AU
	-880 Aug 25 j 00:53	0∘ ⊽		direct	-872 Jul 22 j 15:22	4°M22'56	
	000 0 . 0011011	20.0.20.00	000 710 6		05031 00:10.44	00 m 2052	0017110
conjunction	-880 Oct 03 j 19:11	2° Ω 22'09		conjunction	-872 Nov 08 j 10:44	8°M36'53	0°16'10
minimum elong	-880 Oct 03 j 19:11	2° Ω 22'09		minimum elong	-872 Nov 08 j 10:44	8°M36'53	0°16'09
max. Earth dist.	-880 Oct 03 j 11:00		19.55204 AU	behind sun begin	-872 Nov 08 j 09:53	8°M36'46	
retrograde	-879 Jan 18 j 20:48	6° ≏ 40'45		behind sun end	-872 Nov 08 j 11:35	8° M 37'01	
opposition	-879 Apr 03 j 13:37	4° £ 39'43	0°40'46	max. Earth dist.	-872 Nov 08 j 19:13	8°M38'10	20.05500 AU
min. Earth dist.	-879 Apr 03 j 19:15	4° ₽ 39'08	17.57979 AU	retrograde	-871 Feb 23 j 22:23	12°ML48'37	
direct	-879 Jun 19 j 17:42	2° ≏ 35'26		opposition	-871 May 11 j 06:44	10°M48'26	0°16'09
				min. Earth dist.	-871 May 10 j 21:30	10° M 49′22	18.08875 AU
conjunction	-879 Oct 08 j 15:20	7° ♀ 00'21	0°35'33	direct	-871 Jul 27 j 10:15	8°ML47'08	
minimum elong	-879 Oct 08 j 15:20	7° ჲ 00'21	0°35'33		,		
max. Earth dist.	-879 Oct 08 j 10:27		19.60837 AU	conjunction	-871 Nov 12 j 23:36	12° M 59'27	0°12'57
retrograde	-878 Jan 23 j 17:17	11° ≏ 18'11		minimum elong	-871 Nov 12 j 23:36	12°M59'27	0°12'56
opposition	-878 Apr 08 j 14:47	9° £ 17'20	0°38'21	behind sun begin	-871 Nov 12 j 19:30	12°M58'51	
min. Earth dist.	-878 Apr 08 j 18:54		17.63762 AU	behind sun end	-871 Nov 13 j 03:42	13°M 00'04	
direct	-878 Jun 24 j 18:48	7° Ω 13'28	17.05/02 AU	max. Earth dist.	-871 Nov 13 j 10:37		20.12304 AU
uncci	-0/0 Juli 24 J 18:48	/ ==13.28		max. Earni aist.			20.12304 AU
	070 0 + 12 : 10 22	110000000	0022117	, 1	-871 Dec 17 j 06:38	15°M	
conjunction	-878 Oct 13 j 10:28	11° Ω 36'59	0°33'17	retrograde	-870 Feb 28 j 14:16	17°M 10'17	0012122
minimum elong	-878 Oct 13 j 10:28	11° Ω 36'59		opposition	-870 May 16 j 02:23	15°M10'11	0°12'32
max. Earth dist.	-878 Oct 13 j 06:33		19.66766 AU	min. Earth dist.	-870 May 15 j 14:19		18.15723 AU
retrograde	-877 Jan 28 j 14:03	15° ≏ 54'02			-870 May 20 j 05:59	15°RM	
opposition	-877 Apr 13 j 15:29	13° ≏ 53′20		direct	-870 Aug 01 j 05:41	13°M09'16	
min. Earth dist.	-877 Apr 13 j 17:25	13° ≏ 53'08	17.69814 AU		-870 Oct 07 j 18:34	15° ™	

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -870 in astronomical counting style is the year 871 BCE in historical counting style. -870 Nov 17 j 11:31 17°ML19'59 0°09'41 behind sun end -864 Dec 12 j 02:02 12°**∡** 47′55 conjunction -870 Nov 17 i 11:31 17°ML19'59 0°09'41 max. Earth dist. -864 Dec 12 j 19:10 12°**₹**'50'29 20.59748 AU minimum elong behind sun begin -870 Nov 17 j 06:05 17°**™**19'11 -863 Mar 30 j 11:27 16°**₹**752'51 retrograde -870 Nov 17 j 16:57 min. Earth dist. -863 Jun 15 j 03:01 14°**₹**'55'50 18.62806 AU behind sun end 17°M20'47 -870 Nov 18 j 00:14 -863 Jun 16 j 00:48 17°M21'54 20.19192 AU 14°**х** 53′39 0°-12'-51 max. Earth dist. opposition -869 Mar 05 j 04:11 -863 Aug 31 j 13:32 12°**х** 55′33 retrograde 21°M29'58 direct -869 May 20 j 21:32 opposition 19°M29'58 0°08'53 -869 May 20 j 08:19 -863 Dec 16 j 04:30 16°**₹**56'26 min. Earth dist. 19°M31'18 18.22657 AU conjunction 0°-13'-11 -869 Aug 05 j 22:25 -863 Dec 16 j 04:30 direct 17°M29'26 minimum elong 16°**₹** 56′26 0°13'13 behind sun begin -863 Dec 16 j 00:33 16°**₹**'55'52 conjunction -869 Nov 21 j 22:38 21°M38'36 0°06'24 behind sun end -863 Dec 16 j 08:26 16°**₹**57'00 -869 Nov 21 j 22:38 -863 Dec 17 j 03:33 16°**₹**59'51 20.65756 AU minimum elong 21° M $_{3}8'36$ 0°06'23 max. Earth dist. -869 Nov 21 j 16:28 -862 Apr 04 j 00:32 behind sun begin 21°M37'42 retrograde 21°**₹**′01′30 -862 Jun 20 j 14:37 behind sun end -869 Nov 22 j 04:49 21°M39'31 opposition 19°**х** 02′23 0°-16'-17 max. Earth dist. -869 Nov 22 j 13:33 21°M40'51 20.26153 AU min. Earth dist. -862 Jun 19 j 15:05 19°**∡**04'45 18.68629 AU retrograde -868 Mar 08 j 19:19 25°M47'47 direct -862 Sep 05 j 02:57 17°**х** 04'35 opposition -868 May 24 j 15:50 23°M47'54 0°05'12 min. Earth dist. -868 May 23 j 23:43 23°M49'32 18.29624 AU conjunction -862 Dec 20 j 11:45 21°**∡**°04'17 0°-16'-14 direct -868 Aug 09 j 15:53 21°M47'48 minimum elong -862 Dec 20 j 11:45 21°**х** 04'17 0°16'16 max. Earth dist. -862 Dec 21 j 11:49 21°**₹**07'50 20.71371 AU conjunction -868 Nov 25 j 09:04 25°M55'27 0°03'06 retrograde -861 Apr 08 j 09:59 25°**∡**08'46 minimum elong -868 Nov 25 i 09:04 25°M55'27 0°03'06 min. Earth dist. -861 Jun 24 i 04:55 23°**✗**12'00 18.74051 AU behind sun begin -868 Nov 25 i 02:33 25°M54'30 opposition -861 Jun 25 j 04:04 23°**×**09'41 0°-19'-36 behind sun end -868 Nov 25 i 15:34 25°M56'25 direct -861 Sep 09 j 13:10 21°×12'08 max. Earth dist. -868 Nov 26 j 01:43 25°M57'57 20.33115 AU -867 Mar 01 i 02:55 0°×7 -861 Dec 24 j 18:23 25°**₹**10'41 0°-19'-10 conjunction -867 Mar 13 j 08:16 0°×703'52 -861 Dec 24 j 18:23 25°**х** 10'41 0°19'11 retrograde minimum elong -867 Mar 25 j 18:36 30°RML max. Earth dist. -861 Dec 25 j 18:52 25° ₹14'17 20.76594 AU -867 May 29 j 09:30 28°ML04'08 0°01'31 -860 Apr 11 j 21:22 29°**х** 14'35 opposition retrograde -867 May 28 j 16:38 opposition -860 Jun 28 j 16:41 0°-22'-48 min. Earth dist. 28°M05'51 18.36581 AU 27°**∡**15'31 -867 Aug 14 j 06:36 -860 Jun 27 j 15:53 27°**∡**18′00 18.79071 AU min. Earth dist. direct 26°ML04'28 -867 Oct 29 j 10:43 -860 Sep 13 j 01:37 25°**х** 18′10 desc. node 28°M21'34 direct -867 Nov 26 j 19:51 0°**∡** -860 Dec 28 j 00:41 29°**х** 15'38 0°-22'00 conjunction -867 Nov 29 j 18:48 0°**√**10'40 0°00'-17 -860 Dec 28 j 00:41 29°**х** 15'38 0°22'02 conjunction minimum elong 29°**₹**19'22 20.81409 AU -867 Nov 29 j 18:49 -860 Dec 29 j 02:14 0°**√**10'40 0°00'19 max. Earth dist. minimum elong -867 Nov 29 j 12:19 -859 Jan 09 j 17:26 0°**х** 09′43 0°ಕ behind sun begin behind sun end -867 Nov 30 j 01:18 0°**х**¹11'36 retrograde -859 Apr 16 j 05:52 3°る19'00 max. Earth dist. -867 Nov 30 j 13:12 0°**≯**13'25 20.40039 AU min. Earth dist. -859 Jul 02 j 04:13 1°る22'20 18.83709 AU -859 Jul 03 j 04:33 retrograde -866 Mar 17 j 22:59 4°×18'20 opposition 1°る19'54 0°-25'-51 min. Earth dist. -866 Jun 02 j 06:52 2°**≯**20'43 18.43444 AU -859 Aug 08 j 18:38 30°₹**҂**7 -866 Jun 03 j 02:16 2°**≯**18'45 0°-2'-8 direct -859 Sep 17 j 10:38 29°**∡**¹22'44 opposition direct -866 Aug 18 j 22:15 0°**х** 19'30 -859 Oct 25 j 20:01 0°8 conjunction -866 Dec 04 j 04:00 4°**∡**°24'18 0°-3'-38 conjunction -858 Jan 01 j 06:31 3°る19'10 0°-24'-42 -866 Dec 04 i 03:59 4°**٪**24'18 0°03'39 -858 Jan 01 i 06:31 3°る19'10 0°24'43 minimum elong minimum elong -866 Dec 03 j 21:30 4°**∡**¹23'22 -858 Jan 02 i 08:22 3°る22'57 20.85871 AU behind sun begin max. Earth dist. -866 Dec 04 i 10:27 4°**∡**125'15 -858 Apr 20 j 15:49 7°る22'03 behind sun end retrograde -866 Dec 04 i 23:53 4°**₹**27'16 20.46820 AU -858 Jul 07 i 15:36 5°る22'54 0°-28'-45 max. Earth dist. opposition -865 Mar 22 i 10:35 retrograde 8°**х** 31'17 min. Earth dist. -858 Jul 06 i 13:46 5°る25'29 18.88001 AU opposition -865 Jun 07 i 18:27 6°**₹**31'51 0°-5'-46 direct -858 Sep 21 j 20:59 3°る25'53 min. Earth dist. -865 Jun 06 j 22:47 6° ₹33'50 18.50147 AU direct -865 Aug 23 j 11:29 4°×33'01 conjunction -857 Jan 05 j 11:56 7°る21'24 0°-27'-15 -857 Jan 05 i 11:56 7°**る**21'24 minimum elong 0°27'18 -865 Dec 08 j 12:39 0°-6'-52 -857 Jan 06 j 14:53 conjunction 8°**∡**³36'27 max. Earth dist. 7°る25'19 20.89984 AU -865 Dec 08 j 12:39 -857 Apr 24 j 23:32 minimum elong 8°**х** 36′27 0°06'54 retrograde 11°る23'50 -865 Dec 08 j 06:34 8°**∡**³35'34 -857 Jul 11 j 00:39 behind sun begin min. Earth dist. 9°る27'13 18.91967 AU -857 Jul 12 j 02:08 -865 Dec 08 j 18:44 8°**х**³37'20 opposition 9°**る**24'40 0°-31'-30 behind sun end -865 Dec 09 j 09:46 8°**х** 39'36 20.53421 AU direct -857 Sep 26 j 04:51 7°る27'48 max. Earth dist. retrograde -864 Mar 26 j 00:59 12°**₹**'42'46 -864 Jun 10 j 12:00 10°**∡**′45'41 18.56625 AU -856 Jan 09 j 17:08 11°る22'28 0°-29'-40 min. Earth dist. conjunction -856 Jan 09 j 17:08 11°る22'28 opposition -864 Jun 11 j 09:54 10°**х** 43′28 0°-9'-21 minimum elong 0°29'42 -856 Jan 10 j 20:14 direct -864 Aug 27 j 01:46 8°**х** 45′01 max. Earth dist. 11°る26'24 20.93804 AU retrograde -856 Apr 28 j 08:36 15°**る**24'32 -864 Dec 11 j 20:44 conjunction 12°**₹**′47′09 0°-10'-4 min. Earth dist. -856 Jul 14 j 09:06 13°る28'01 18.95639 AU minimum elong -864 Dec 11 j 20:44 12°**х** 47′10 0°10'06 -856 Jul 15 j 11:59 13°る25'20 0°-34'-5 opposition

-856 Sep 29 j 13:09

direct

11°る28'37

behind sun begin

-864 Dec 11 j 15:26

12°**∡**¹46'24

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -855 in astronomical counting style is the year 856 BCE in historical counting style. -855 Jan 12 j 22:06 15°る22'33 0°-31'-55 -848 Oct 31 i 09:56 conjunction direct 13°≈15'37 minimum elong -855 Jan 12 j 22:06 15°**る**22'33 0°31'57 -847 Jan 05 j 10:09 15°≈ max. Earth dist. -855 Jan 14 j 02:10 15°る26'36 20.97310 AU -855 May 02 j 16:03 19°る24'18 -847 Feb 13 j 15:05 17°**≈**07'06 0°-43'-37 retrograde conjunction 17°**る**25'07 -855 Jul 19 j 21:21 -847 Feb 13 i 15:05 0°-36'-28 minimum elong 17°≈07'06 0°43'39 opposition -847 Feb 14 j 16:18 -855 Jul 18 j 18:59 17°る27'45 18.98990 AU min. Earth dist. max. Earth dist. 17°≈10'41 21.10526 AU -855 Oct 03 j 19:39 -847 Jun 04 j 08:08 21°≈08'29 direct 15°**る**28'33 retrograde -847 Aug 21 j 10:13 opposition 19°≈09'13 0°-48'-31 -854 Jan 17 j 03:00 19°る21'50 0°-34'-1 19°≈11'27 19.10268 AU conjunction min. Earth dist. -847 Aug 20 j 12:01 -854 Jan 17 j 02:59 -847 Nov 04 j 14:37 minimum elong 19°**る**21'50 0°34'03 direct 17°≈13'09 -854 Jan 18 j 06:50 max. Earth dist. 19°る25'51 21.00500 AU -854 May 07 j 00:51 23°る23'20 -846 Feb 17 j 20:58 21°**≈**04'41 0°-44'-11 retrograde conjunction -854 Jul 23 j 02:39 21°る26'53 19.02009 AU -846 Feb 17 j 20:59 min. Earth dist. minimum elong 21°**≈**04'41 0°44'12 -854 Jul 24 j 05:58 -846 Feb 18 j 20:31 opposition 21°る24'10 0°-38'-41 max. Earth dist. 21°≈08'02 21.09789 AU -854 Oct 08 j 02:29 direct 19°る27'44 retrograde -846 Jun 08 j 16:52 25°≈06'14 opposition -846 Aug 25 j 16:31 23°**≈**06'51 0°-49'-2 conjunction -853 Jan 21 j 07:50 23°**る**20'30 0°-35'-57 min. Earth dist. -846 Aug 24 j 18:51 23°≈09'02 19.09267 AU minimum elong -853 Jan 21 j 07:49 23°**る**20'30 0°35'58 direct -846 Nov 08 j 19:26 21°≈10'39 -853 Jan 22 j 12:21 max. Earth dist. 23°る24'36 21.03330 AU retrograde -853 May 11 j 07:57 27°る21'49 conjunction -845 Feb 22 j 03:07 25°≈02'21 0°-44'-32 min. Earth dist. -853 Jul 27 j 11:55 25°る25'19 19.04653 AU minimum elong -845 Feb 22 j 03:07 25°≈02'21 0°44'35 opposition -853 Jul 28 j 14:26 25°**පි**22'40 0°-40'-43 max. Earth dist. -845 Feb 23 i 02:16 25°≈05'38 21.08538 AU direct -853 Oct 12 j 07:53 23°る26'23 retrograde -845 Jun 12 j 23:46 29°≈04'06 opposition -845 Aug 29 j 22:46 27°≈04'35 0°-49'-19 conjunction -852 Jan 25 i 12:30 27°る18'42 0°-37'-42 min. Earth dist. -845 Aug 29 j 02:35 27°≈06'38 19.07783 AU minimum elong -852 Jan 25 i 12:30 27°る18'42 0°37'44 direct -845 Nov 12 j 23:36 25°≈08'16 max. Earth dist. -852 Jan 26 j 16:34 27°る22'43 21.05784 AU -852 Mar 16 j 20:00 0°≈ -844 Feb 26 i 09:27 29°≈00'12 0°-44'-41 conjunction -852 May 14 j 17:18 1°≈19'54 -844 Feb 26 j 09:27 29°≈00'12 0°44'42 retrograde minimum elong -852 Jul 15 j 06:36 -844 Feb 27 j 06:58 30°Rる max. Earth dist. 29°≈03'15 21.06850 AU -852 Jul 31 j 22:27 -844 Mar 15 j 02:01 29°る20'47 0°-42'-33 0°\ opposition -852 Jul 30 j 19:25 -844 Jun 16 j 08:57 min. Earth dist. 29°る23'29 19.06896 AU 3°\(\)02'14 retrograde -844 Sep 01 j 09:13 -852 Oct 15 j 13:54 1°**)** €04'34 19.05887 AU direct 27°る24'37 min. Earth dist. -851 Jan 06 j 01:30 -844 Sep 02 j 04:50 1°**米**02'35 0°-49'-21 0°≈ opposition -844 Sep 29 j 08:17 30°R≈ -851 Jan 28 j 17:30 -844 Nov 16 j 04:28 1°≈16'36 0°-39'-16 29°≈06'05 conjunction direct -851 Jan 28 j 17:30 0°**)**€ -843 Jan 01 j 12:40 minimum elong 1°≈16'36 0°39'17 max. Earth dist. -851 Jan 29 j 21:52 1°≈20'39 21.07793 AU retrograde -851 May 19 j 00:02 5°≈17'44 conjunction -843 Mar 01 j 16:21 2°\ 58'23 0°-44'-37 min. Earth dist. -851 Aug 04 j 04:18 3°≈21'13 19.08669 AU minimum elong -843 Mar 01 j 16:21 2°****58'23 0°44'38 3°**)**€01'22 21.04747 AU opposition -851 Aug 05 j 06:04 3°**≈**18'38 0°-44'-11 max. Earth dist. -843 Mar 02 j 13:25 direct -851 Oct 19 j 18:42 1°≈22'35 retrograde -843 Jun 20 j 16:12 7°**)**€00'43 opposition -843 Sep 06 j 10:44 5°\;\;\ 00'58 0°-49'-10 -850 Feb 01 j 22:37 5°≈14'19 0°-40'-39 min. Earth dist. -843 Sep 05 j 16:39 5°**)** €02'48 19.03593 AU conjunction -850 Feb 01 j 22:37 5°≈14'19 0°40'41 direct -843 Nov 20 j 08:00 3°**)**€04'19 minimum elong -850 Feb 03 i 01:55 max. Earth dist. 5°≈18'13 21.09322 AU -850 May 23 i 09:35 -842 Mar 05 j 23:34 6°**¥**57'03 0°-44'-20 retrograde 9°≈15'27 conjunction -850 Aug 08 j 11:42 7°≈18'56 19.09935 AU -842 Mar 05 i 23:34 6°**¥**57'03 0°44'21 min. Earth dist. minimum elong -850 Aug 09 j 13:25 -842 Mar 06 i 18:48 6°**)** 59'47 21.02285 AU opposition 7°≈16'21 0°-45'-36 max. Earth dist. -850 Oct 24 j 00:07 -842 Jun 25 i 02:01 direct 5°≈20'22 retrograde 10°**¥**59'47 -842 Sep 10 i 16:44 opposition 8°\ 59'54 0°-48'-44 -842 Sep 09 j 23:21 -849 Feb 06 i 03:49 9°≈11'56 0°-41'-51 min. Earth dist. 9°¥01'41 19.00954 AU conjunction minimum elong -849 Feb 06 i 03:49 9°≈11'56 0°41'52 direct -842 Nov 24 j 13:06 7°**升**03'06 -849 Feb 07 i 06:59 max. Earth dist. 9°≈15'49 21.10298 AU 10°**)** 56'23 0°-43'-50 -849 May 27 j 16:10 -841 Mar 10 j 07:11 retrograde 13°≈13'07 conjunction -849 Aug 13 j 20:39 -841 Mar 10 j 07:11 opposition 11°≈14'01 0°-46'-48 minimum elong 10°**¥** 56′23 0°43'51 19.10626 AU -841 Mar 11 j 01:58 10°**)**59'03 20.99468 AU min. Earth dist. -849 Aug 12 j 20:25 11°**≈**16′26 max. Earth dist. -841 Jun 29 j 10:20 direct -849 Oct 28 j 04:53 9°≈18'03 retrograde 14°**)** 59'34 opposition -841 Sep 14 j 22:54 12°**)** 59'36 0°-48'-5 -848 Feb 10 j 09:20 13°≈09'31 0°-42'-50 min. Earth dist. -841 Sep 14 j 07:00 13°**₭**01'13 18.97965 AU conjunction -848 Feb 10 j 09:20 direct -841 Nov 28 j 16:50 11°**)**€02'38 minimum elong 13°≈09'31 0°42'51 -848 Feb 11 j 11:01 max. Earth dist. 13°≈13'11 21.10710 AU -840 Mar 13 j 15:27 -848 Mar 14 j 21:42 15°≈ conjunction 14°**¥**56'32 0°-43'-8 -840 Mar 13 j 15:27 retrograde -848 May 31 j 01:24 17°≈10'48 minimum elong 14°**)** 56'32 0°43'10 min. Earth dist. -848 Aug 16 j 03:41 15°≈14'01 19.10742 AU max. Earth dist. -840 Mar 14 j 08:13 14°**¥** 58'55 20.96328 AU opposition -848 Aug 17 j 03:31 15°≈11'37 0°-47'-47 retrograde -840 Jul 02 j 20:40 19°**)**€00'14 -848 Aug 21 j 23:29 15°R≈ -840 Sep 18 j 05:02 17°**)** 00'10 0°-47'-11 opposition

Attention, astronom				l), Astrodienst A		, , ,	-
	nical year style is used: T						
min. Earth dist.	-840 Sep 17 j 14:11		18.94653 AU	min. Earth dist.	-832 Oct 20 j 17:13		18.54192 AU
direct	-840 Dec 01 j 22:07	15°) €03'02		direct	-831 Jan 03 j 06:34	17° Ƴ 50'09	
conjunction	-839 Mar 18 j 00:29	18° ¥ 57'42	0°-42'-13	conjunction	-831 Apr 21 j 03:27	21° Ƴ 53′24	0°-27'-31
minimum elong	-839 Mar 18 j 00:29	18° ¥ 57'42	0°42'14	minimum elong	-831 Apr 21 j 03:27	21° Y 53'24	0°27'32
max. Earth dist.	-839 Mar 18 j 16:30	18° ¥ 59'59	20.92839 AU	max. Earth dist.	-831 Apr 21 j 02:42	21° Y 53'18	20.50951 AU
retrograde	-839 Jul 07 j 06:24	23° ₭ 01'56		retrograde	-831 Aug 10 j 05:07	26° Ƴ 03'12	
opposition	-839 Sep 22 j 11:28	21° ¥ 01'49	0°-46'-4	opposition	-831 Oct 25 j 02:27	24° Y 01'59	0°-29'00
min. Earth dist.	-839 Sep 21 j 22:23	21° ¥ 03'10	18.90980 AU	min. Earth dist.	-831 Oct 25 j 04:03	24° Ƴ 01'49	18.47638 AU
direct	-839 Dec 06 j 02:57	19°) (03'10	10.50500110	direct	-830 Jan 07 j 16:00	22° Υ '02'09	10, 050110
direct	037 Dec 00 j 02.37	17 7(0451		direct	030 3 a n 07 j 10.00	22 1020)	
conjunction	-838 Mar 22 j 10:01	22°) 59′59	0°-41'-5	conjunction	-830 Apr 25 j 19:03	26° Y ′06'44	0°-24'-51
minimum elong	-838 Mar 22 j 10:01	22° H 59'59	0°41'07	minimum elong	-830 Apr 25 j 19:03	26° Υ 06'44	0°24'51
_	-			C			
max. Earth dist.	-838 Mar 22 j 23:36		20.88998 AU	max. Earth dist.	-830 Apr 25 j 15:13		20.44328 AU
retrograde	-838 Jul 11 j 17:13	27°) €04'51		_	-830 Jul 19 j 15:53	0° 8	
opposition	-838 Sep 26 j 18:05	25° ∺ 04'39		retrograde	-830 Aug 14 j 19:16	0° 8 17'21	
min. Earth dist.	-838 Sep 26 j 06:24		18.86946 AU		-830 Sep 10 j 00:47	30° ₹Ƴ	
direct	-838 Dec 10 j 08:21	23° ∺ 07'10		opposition	-830 Oct 29 j 12:15	28° Ƴ 15'57	0°-25'-58
				min. Earth dist.	-830 Oct 29 j 15:45	28° Ƴ 15'35	18.40960 AU
conjunction	-837 Mar 26 j 20:29	27°) €03'33	0°-39'-45	direct	-829 Jan 12 j 02:42	26° Ƴ 15'42	
minimum elong	-837 Mar 26 j 20:29	27°) €03'33	0°39'46		-829 Apr 24 j 07:08	$B_{\circ 0}$	
max. Earth dist.	-837 Mar 27 j 09:01	27° ₩ 05'21	20.84764 AU		1 3		
	-837 May 22 j 23:19	0°Υ		conjunction	-829 Apr 30 j 11:47	0° 8 21'44	0°-22'-2
retrograde	-837 Jul 16 j 04:03	1° Υ ′09'03		minimum elong	-829 Apr 30 j 11:47	0° 8 21'44	
retrograde	-837 Sep 09 j 15:39	30°R ₩		max. Earth dist.	-829 Apr 30 j 07:07	_	20.37600 AU
		29°) €08'47	00 421 7				20.37000 AO
opposition	-837 Oct 01 j 01:02			retrograde	-829 Aug 19 j 09:14	4° 8 33'10	00 221 47
min. Earth dist.	-837 Sep 30 j 15:21		18.82504 AU	opposition	-829 Nov 02 j 22:28	2° 8 31'37	
direct	-837 Dec 14 j 14:42	27°) 11′04		min. Earth dist.	-829 Nov 03 j 03:17		18.34199 AU
	-836 Mar 10 j 04:18	0° Υ		direct	-828 Jan 16 j 13:37	0° 8 30'59	
conjunction	-836 Mar 30 j 07:39	1° Ƴ 08'27	0°-38'-12	conjunction	-828 May 04 j 05:12	4° 8 38'28	0°-19'-5
minimum elong	-836 Mar 30 j 07:39	1° Y ′08′27	0°38'13	minimum elong	-828 May 04 j 05:12	4° 8 38'28	0°19'06
max. Earth dist.	-836 Mar 30 j 17:11	1° Y 09'49	20.80121 AU	max. Earth dist.	-828 May 03 j 21:24	4° 8 37'20	20.30827 AU
retrograde	-836 Jul 19 j 15:31	5° Ƴ 14'38		retrograde	-828 Aug 23 j 00:18	8° 8 50'46	
opposition	-836 Oct 04 j 08:22	3° Y 14'15	0°-41'-18	opposition	-828 Nov 06 j 09:26	6° 8 49'06	0°-19'-27
min. Earth dist.	-836 Oct 04 j 00:30		18.77638 AU	min. Earth dist.	-828 Nov 06 j 16:17	_	18.27423 AU
direct	-836 Dec 17 j 21:04	1° Υ 16'16	10.77030110	direct	-827 Jan 20 j 01:32	4° 8 48'04	10.27 .20 110
direct	030 Bec 17 j 21.01	1 11010		direct	027 Juli 20 j 01.32	. 🔾 10 0 1	
conjunction	-835 Apr 03 j 19:48	5° Y °14'42	0° 36' 27	conjunction	-827 May 08 j 23:39	8° 8 57'06	0° 16' 1
3	-835 Apr 03 j 19:49	5°Υ14'42	0°36'27	-	-827 May 08 j 23:39	8° 8 57'06	0°16'01
minimum elong				minimum elong			
max. Earth dist.	-835 Apr 04 j 03:53		20.75026 AU	max. Earth dist.	-827 May 08 j 15:05		20.24046 AU
retrograde	-835 Jul 24 j 03:01	9° Υ 21'33		retrograde	-827 Aug 27 j 16:01	13° 8 10'15	
opposition	-835 Oct 08 j 15:58	7° Υ 21'03	0°-39'-15				
min. Earth dist.				opposition	-827 Nov 10 j 20:57	11° 8 08'30	
	-835 Oct 08 j 10:10	7° Y 21'39	18.72317 AU	opposition min. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53	11° 8 08'30 11° 8 07'39	0°-15'-59 18.20647 AU
direct	-835 Oct 08 j 10:10 -835 Dec 22 j 04:47				-827 Nov 10 j 20:57	11° 8 08'30	
direct	-835 Dec 22 j 04:47	7° Υ 21'39 5° Υ 22'46	18.72317 AU	min. Earth dist. direct	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22	11° 엉 08'30 11° 엉 07'39 9° 엉 07'07	18.20647 AU
direct	-	7° Y 21'39		min. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53	11°808'30 11°807'39 9°807'07 13°817'44	18.20647 AU
	-835 Dec 22 j 04:47	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18	18.72317 AU 0°-34'-30 0°34'30	min. Earth dist. direct	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22	11° 엉 08'30 11° 엉 07'39 9° 엉 07'07	18.20647 AU
conjunction	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18	18.72317 AU 0°-34'-30	min. Earth dist. direct conjunction	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48	11°808'30 11°807'39 9°807'07 13°817'44	18.20647 AU 0°-12'-50
conjunction minimum elong max. Earth dist.	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18	18.72317 AU 0°-34'-30 0°34'30	min. Earth dist. direct conjunction minimum elong	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09	18.20647 AU 0°-12'-50
conjunction minimum elong max. Earth dist. retrograde	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18 9°Υ23'00 13°Υ29'52	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19	18.20647 AU 0°-12'-50 0°12'51
conjunction minimum elong max. Earth dist. retrograde opposition	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18 9°Υ23'00 13°Υ29'52 11°Υ29'12	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00	min. Earth dist. direct conjunction minimum elong behind sun begin	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01	18.20647 AU 0°-12'-50
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18 9°Υ23'00 13°Υ29'52 11°Υ29'12 11°Υ29'36	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8	18.20647 AU 0°-12'-50 0°12'51
conjunction minimum elong max. Earth dist. retrograde opposition	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03	7°Υ21'39 5°Υ22'46 9°Υ22'18 9°Υ22'18 9°Υ23'00 13°Υ29'52 11°Υ29'12	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'36 9°Y30'33	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47 15°829'58	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'36 9°Y30'33 13°Y31'15	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU
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conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00 -833 Apr 13 j 01:34	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'12 11°Y29'36 9°Y30'33 13°Y31'15 13°Y31'15	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23 -826 Nov 27 j 04:03 -825 Jan 29 j 03:22	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53 15°88 13°828'13	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 13 j 01:34 -833 Aug 02 j 03:11	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'12 11°Y29'36 9°Y30'33 13°Y31'15 13°Y31'15 13°Y31'46 17°Y39'32	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU 0°-32'-21 0°32'22 20.63613 AU	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23 -826 Nov 27 j 04:03	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53 15°88	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23
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conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde conjunction min. Earth dist. direct	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 13 j 01:34 -833 Oct 17 j 08:29 -833 Oct 17 j 06:28 -833 Dec 30 j 21:13 -832 Apr 16 j 12:15 -832 Apr 16 j 12:15	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'36 9°Y30'33 13°Y31'15 13°Y31'15 13°Y31'46 17°Y39'32 15°Y38'42 15°Y38'54 13°Y39'40 17°Y41'36 17°Y41'36	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU 0°-32'-21 0°32'22 20.63613 AU 0°-34'-31 18.60529 AU 0°-30'-1 0°30'01	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23 -826 Nov 27 j 04:03 -825 Jan 29 j 03:22 -825 Mar 31 j 00:54 -825 May 18 j 14:59 -825 May 18 j 14:59 -825 May 18 j 09:25 -825 May 18 j 20:34 -825 May 18 j 20:34 -825 May 18 j 02:35	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53 15°88 13°828'13 15°8 17°840'28 17°840'28 17°840'28 17°840'28 17°840'28	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23 18.13924 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist.	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 13 j 01:34 -833 Oct 17 j 08:29 -833 Oct 17 j 06:28 -833 Dec 30 j 21:13 -832 Apr 16 j 12:15 -832 Apr 16 j 12:15 -832 Apr 16 j 12:34	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'12 11°Y29'36 9°Y30'33 13°Y31'15 13°Y31'15 13°Y31'46 17°Y31'46 17°Y39'32 15°Y38'42 15°Y38'54 13°Y39'40 17°Y41'36 17°Y41'36 17°Y41'36	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU 0°-32'-21 0°32'22 20.63613 AU 0°-34'-31 18.60529 AU 0°-30'-1	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23 -826 Nov 27 j 04:03 -825 Jan 29 j 03:22 -825 May 18 j 14:59 -825 May 18 j 14:59 -825 May 18 j 14:59 -825 May 18 j 09:25 -825 May 18 j 20:34 -825 May 18 j 02:35 -825 Sep 06 j 02:07	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53 15°88 13°828'13 15°8 17°840'28 17°840'28 17°840'28 17°841'16 17°838'38 21°855'24	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23 18.13924 AU 0°-9'-33 0°09'33
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde conjunction min. Earth dist. direct	-835 Dec 22 j 04:47 -834 Apr 08 j 08:32 -834 Apr 08 j 08:32 -834 Apr 08 j 13:20 -834 Jul 28 j 15:03 -834 Oct 13 j 00:03 -834 Oct 12 j 20:11 -834 Dec 26 j 12:40 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 12 j 22:00 -833 Apr 13 j 01:34 -833 Oct 17 j 08:29 -833 Oct 17 j 06:28 -833 Dec 30 j 21:13 -832 Apr 16 j 12:15 -832 Apr 16 j 12:15	7°Y21'39 5°Y22'46 9°Y22'18 9°Y22'18 9°Y23'00 13°Y29'52 11°Y29'36 9°Y30'33 13°Y31'15 13°Y31'15 13°Y31'46 17°Y39'32 15°Y38'42 15°Y38'54 13°Y39'40 17°Y41'36 17°Y41'36	18.72317 AU 0°-34'-30 0°34'30 20.69512 AU 0°-37'00 18.66603 AU 0°-32'-21 0°32'22 20.63613 AU 0°-34'-31 18.60529 AU 0°-30'-1 0°30'01	min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-827 Nov 10 j 20:57 -827 Nov 11 j 04:53 -826 Jan 24 j 14:22 -826 May 13 j 18:48 -826 May 13 j 18:48 -826 May 13 j 14:45 -826 May 13 j 22:51 -826 May 13 j 07:10 -826 Jun 12 j 08:32 -826 Sep 01 j 08:10 -826 Nov 15 j 09:18 -826 Nov 15 j 19:23 -826 Nov 27 j 04:03 -825 Jan 29 j 03:22 -825 Mar 31 j 00:54 -825 May 18 j 14:59 -825 May 18 j 14:59 -825 May 18 j 09:25 -825 May 18 j 20:34 -825 May 18 j 20:34 -825 May 18 j 02:35	11°808'30 11°807'39 9°807'07 13°817'44 13°817'44 13°817'09 13°818'19 13°816'01 15°8 17°831'47 15°829'58 15°828'53 15°88 13°828'13 15°8 17°840'28 17°840'28 17°849'39 17°841'16 17°838'38 21°855'24 19°853'33	18.20647 AU 0°-12'-50 0°12'51 20.17296 AU 0°-12'-23 18.13924 AU 0°-9'-33 0°09'33

Attention astronom			n astronomical cou	nting style is the year 8	325 BCE in historical con	unting style	
direct	-824 Feb 02 j 18:14	-	i astronomicai coa	conjunction	-818 Jun 20 j 11:54	19° I 16'11	0°14'43
direct	02+1 co 02 j 10.1+	17 0312)		minimum elong	-818 Jun 20 j 11:54	19° I 16'11	0°14'43
conjunction	-824 May 22 j 12:08	22° 8 05'21	00 6! 11	behind sun begin	-818 Jun 20 j 09:24	19 Ⅱ 1011 19° Ⅱ 15'49	0 1443
3	-824 May 22 j 12:08	22° 8 05'21	0°06'12	behind sun end	•	19 Ⅱ 13 49 19° Ⅱ 16'33	
minimum elong			0 00 12		-818 Jun 20 j 14:24	19 П 16 33 23° П 36'31	
behind sun begin	-824 May 22 j 05:43	22° 8 04'25		retrograde	-818 Oct 07 j 21:29		0010112
behind sun end	-824 May 22 j 18:33	22° 8 06'17	20.02004.444	opposition	-818 Dec 20 j 15:54		0°18'12
max. Earth dist.	-824 May 21 j 20:34		20.03904 AU	min. Earth dist.	-818 Dec 21 j 14:30		17.61986 AU
retrograde	-824 Sep 09 j 19:39	26° 8 21'11		direct	-817 Mar 05 j 23:20	19° Ⅱ 29'15	
opposition	-824 Nov 23 j 12:09	24° 8 19'18		max. Earth dist.	-817 Jun 24 j 10:49	23° ∐ 49'41	19.59104 AU
min. Earth dist.	-824 Nov 24 j 01:51		18.00559 AU				
direct	-823 Feb 06 j 08:44	22° 8 16'51		conjunction	-817 Jun 25 j 13:59	23° Ⅱ 53'51	0°18'03
				minimum elong	-817 Jun 25 j 13:59	23° Ⅱ 53'51	0°18'04
conjunction	-823 May 27 j 10:19	26° 8 32'24	0°-2'-45	retrograde	-817 Oct 12 j 19:44	28° Ⅱ 14'46	
minimum elong	-823 May 27 j 10:19	26° 8 32'24	0°02'45	opposition	-817 Dec 25 j 11:04	26° Ⅱ 12'14	0°21'52
behind sun begin	-823 May 27 j 03:32	26° 8 31'24		min. Earth dist.	-817 Dec 26 j 09:34	26° Ⅱ 09'47	17.56345 AU
behind sun end	-823 May 27 j 17:05	26° 8 33'23		direct	-816 Mar 09 j 22:15	24° Ⅱ 07'01	
max. Earth dist.	-823 May 26 j 17:39		19.97237 AU		J		
	-823 Aug 02 j 02:11	0°II		conjunction	-816 Jun 29 j 16:37	28° Ⅱ 32'56	0°21'17
retrograde	-823 Sep 14 j 15:33	0° Ⅱ 49'04		minimum elong	-816 Jun 29 j 16:37	28° I I32'56	0°21'17
retrograde	-823 Oct 28 j 21:22	30°R ∀		max. Earth dist.	-816 Jun 28 j 12:52		19.53649 AU
ammagition		28° 8 47'09	00 11 2	max. Earth dist.	-	0°95	19.55049 AU
opposition	-823 Nov 28 j 02:49		17.93897 AU	. 1	-816 Jul 23 j 15:18		
min. Earth dist.	-823 Nov 28 j 17:27	. •	17.93897 AU	retrograde	-816 Oct 16 j 16:53	2°554'22	000 510 5
direct	-822 Feb 11 j 01:28	26° 8 44'21		opposition	-816 Dec 29 j 07:07	0° © 51'46	0°25'25
asc. node	-822 Mar 10 j 10:59	27° 8 04'14		min. Earth dist.	-816 Dec 30 j 07:13		17.51121 AU
	-822 May 15 j 04:30	Π $^{\circ}0$			-815 Jan 18 j 15:07	30° Ŗ Ⅱ	
				direct	-815 Mar 14 j 20:00	28° Ⅱ 46′13	
conjunction	-822 Jun 01 j 09:02	1° Ⅲ 01'30	0°00'49		-815 May 07 j 17:58	0 \circ \odot	
minimum elong	-822 Jun 01 j 09:01	1° Ⅱ 01'30	0°00'50				
behind sun begin	-822 Jun 01 j 02:14	1° Ⅱ 00'30		conjunction	-815 Jul 04 j 19:30	3° © 13'21	0°24'23
behind sun end	-822 Jun 01 j 15:48	1° Ⅱ 02'29		minimum elong	-815 Jul 04 j 19:30	3° © 13'21	0°24'24
max. Earth dist.	-822 May 31 j 13:24	0°П58'33	19.90579 AU	max. Earth dist.	-815 Jul 03 j 14:44	3°908'54	19.48665 AU
retrograde	-822 Sep 19 j 10:35	5° Ⅱ 19'01		retrograde	-815 Oct 21 j 15:54	7°935'17	
opposition	-822 Dec 02 j 18:26	3° Ⅱ 17'00	0°02'49	opposition	-814 Jan 03 j 03:49	5°532'38	0°28'48
min. Earth dist.	-822 Dec 02 j 18:20		17.87266 AU	min. Earth dist.	-814 Jan 04 j 03:23		17.46395 AU
			17.87200 AU				17.40393 AU
direct	-821 Feb 15 j 17:57	1° Ⅱ 13'49	10.02070 444	direct	-814 Mar 19 j 20:29	3° © 26'47	
max. Earth dist.	-821 Jun 05 j 11:57	5°Щ29′24	19.83970 AU				
		_		conjunction	-814 Jul 09 j 22:43	7° © 55'05	0°27'20
conjunction	-821 Jun 06 j 08:49	5° Ⅱ 32'33		minimum elong	-814 Jul 09 j 22:43	7° © 55'05	
minimum elong	-821 Jun 06 j 08:48	5° Ⅱ 32'33	0°04'22	max. Earth dist.	-814 Jul 08 j 18:21	7° © 50'41	19.44193 AU
behind sun begin	-821 Jun 06 j 02:08	5° Ⅱ 31'34		retrograde	-814 Oct 26 j 14:09	12° © 17'28	
behind sun end	-821 Jun 06 j 15:28	5° Ⅱ 33'32		opposition	-813 Jan 08 j 01:23	10° © 14'49	0°32'00
retrograde	-821 Sep 24 j 07:26	9° Ⅱ 50'50		min. Earth dist.	-813 Jan 09 j 02:00	10°912'07	17.42206 AU
opposition	-821 Dec 07 j 10:32	7° Ⅱ 48'45	0°06'43	direct	-813 Mar 24 j 19:35	8° © 08'44	
min. Earth dist.	-821 Dec 08 j 04:24	7° Ⅱ 46'48	17.80689 AU	max. Earth dist.	-813 Jul 13 j 20:51	12° © 33'31	19.40290 AU
direct	-820 Feb 20 j 12:23	5° Ⅱ 45'09			-		
max. Earth dist.	-820 Jun 09 j 09:54		19.77438 AU	conjunction	-813 Jul 15 j 02:16	12° © 38'05	0°30'07
				minimum elong	-813 Jul 15 j 02:16	12° © 38'05	0°30'07
conjunction	-820 Jun 10 j 09:17	10° Ⅱ 05'26	0°07'51	retrograde	-813 Oct 31 j 14:08	17°9500'52	
minimum elong	-820 Jun 10 j 09:17	10° Д 05'26	0°07'51	opposition	-812 Jan 12 j 23:22	14°958'16	0°35'01
behind sun begin			0 0/31	оррозиюн		14 -30 10	0 55 01
behind sun end				min Earth dist	•	140655120	17 29500 ATT
	-820 Jun 10 j 03:12	10° Ⅱ 04'32		min. Earth dist.	-812 Jan 13 j 23:28		17.38590 AU
	-820 Jun 10 j 15:21	10° Ⅱ 06'19		direct	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30	12° © 52'01	
retrograde	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33	10°Щ06'19 14°Щ24'26			-812 Jan 13 j 23:28	12° © 52'01	17.38590 AU 19.36951 AU
retrograde opposition	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40	10°Щ06'19 14°Щ24'26 12°Щ22'15		direct max. Earth dist.	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52	12°©52'01 17°©17'55	19.36951 AU
retrograde opposition min. Earth dist.	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03	0°10'36 17.74235 AU	direct max. Earth dist.	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16	12°952'01 17°917'55 17°922'21	19.36951 AU 0°32'43
retrograde opposition min. Earth dist. direct	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13	17.74235 AU	direct max. Earth dist. conjunction minimum elong	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16	12°©52'01 17°©17'55	19.36951 AU
retrograde opposition min. Earth dist.	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13		direct max. Earth dist.	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16	12°952'01 17°917'55 17°922'21	19.36951 AU 0°32'43
retrograde opposition min. Earth dist. direct	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13	17.74235 AU	direct max. Earth dist. conjunction minimum elong	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16	12°952'01 17°917'55 17°922'21 17°922'21	19.36951 AU 0°32'43 0°32'43
retrograde opposition min. Earth dist. direct	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13	17.74235 AU	direct max. Earth dist. conjunction minimum elong retrograde	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34	12°\$52'01 17°\$17'55 17°\$22'21 17°\$22'21 21°\$45'29 19°\$42'58	19.36951 AU 0°32'43 0°32'43
retrograde opposition min. Earth dist. direct max. Earth dist.	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17	17.74235 AU 19.71070 AU	direct max. Earth dist. conjunction minimum elong retrograde opposition	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22	12°\$52'01 17°\$17'55 17°\$22'21 17°\$22'21 21°\$45'29 19°\$42'58	19.36951 AU 0°32'43 0°32'43 0°37'48
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17	17.74235 AU 19.71070 AU 0°11'18	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist.	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08	12°\$52'01 17°\$17'55 17°\$22'21 17°\$22'21 21°\$45'29 19°\$42'58 19°\$40'15 17°\$36'36	19.36951 AU 0°32'43 0°32'43 0°37'48
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 05:25	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00	17.74235 AU 19.71070 AU 0°11'18	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Apr 02 j 22:08	12°\$52'01 17°\$17'55 17°\$22'21 17°\$22'21 21°\$45'29 19°\$42'58 19°\$40'15 17°\$36'36	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 05:25 -819 Jun 15 j 15:11	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44	17.74235 AU 19.71070 AU 0°11'18	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist.	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Apr 02 j 22:08 -811 Jul 23 j 04:44	12°952'01 17°9517'55 17°9522'21 17°9522'21 21°945'29 19°942'58 19°940'15 17°936'36 22°903'12	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU 19.34169 AU
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 05:25 -819 Jun 15 j 15:11 -819 Oct 03 j 01:05	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44 18°Д59'42	17.74235 AU 19.71070 AU 0°11'18 0°11'19	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Apr 02 j 22:08 -811 Jul 23 j 04:44	12°S52'01 17°S17'55 17°S22'21 17°S22'21 21°S45'29 19°S42'58 19°S40'15 17°S36'36 22°S03'12	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU 19.34169 AU 0°35'06
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 15:11 -819 Oct 03 j 01:05 -819 Dec 15 j 21:22	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44 18°Д59'42 16°Д57'24	17.74235 AU 19.71070 AU 0°11'18 0°11'19	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Jul 23 j 04:44 -811 Jul 24 j 10:06 -811 Jul 24 j 10:06	12°S52'01 17°S17'55 17°S22'21 17°S22'21 21°S45'29 19°S42'58 19°S40'15 17°S36'36 22°S03'12 22°S07'47 22°S07'47	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU 19.34169 AU
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 15:11 -819 Oct 03 j 01:05 -819 Dec 15 j 21:22 -819 Dec 16 j 17:54	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44 18°Д59'42 16°Д57'24 16°Д55'09	17.74235 AU 19.71070 AU 0°11'18 0°11'19	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Apr 02 j 22:08 -811 Jul 23 j 04:44 -811 Jul 24 j 10:06 -811 Jul 24 j 10:06 -811 Nov 09 j 14:19	12°S52'01 17°S17'55 17°S22'21 17°S22'21 21°S45'29 19°S42'58 19°S40'15 17°S36'36 22°S03'12 22°S07'47 22°S07'47 26°S31'13	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU 19.34169 AU 0°35'06 0°35'06
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist. direct	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 05:25 -819 Jun 15 j 15:11 -819 Oct 03 j 01:05 -819 Dec 15 j 21:22 -819 Dec 16 j 17:54 -818 Mar 01 j 03:27	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44 18°Д59'42 16°Д57'24 16°Д55'09 14°Д52'58	17.74235 AU 19.71070 AU 0°11'18 0°11'19 0°14'26 17.67972 AU	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde opposition	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Jul 23 j 04:44 -811 Jul 24 j 10:06 -811 Jul 24 j 10:06 -811 Nov 09 j 14:19 -810 Jan 21 j 21:55	12°S52'01 17°S21'155 17°S22'21 17°S22'21 21°S45'29 19°S42'58 19°S40'15 17°S36'36 22°S03'12 22°S07'47 22°S07'47 26°S31'13 24°S28'47	19.36951 AU 0°32'43 0°32'43 17.35531 AU 19.34169 AU 0°35'06 0°35'06 0°40'20
retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end retrograde opposition min. Earth dist.	-820 Jun 10 j 15:21 -820 Sep 28 j 03:33 -820 Dec 11 j 03:40 -820 Dec 11 j 23:56 -819 Feb 24 j 06:43 -819 Jun 14 j 09:47 -819 Jun 15 j 10:18 -819 Jun 15 j 10:18 -819 Jun 15 j 15:11 -819 Oct 03 j 01:05 -819 Dec 15 j 21:22 -819 Dec 16 j 17:54	10°Д06'19 14°Д24'26 12°Д22'15 12°Д20'03 10°Д18'13 14°Д36'17 14°Д40'01 14°Д40'00 14°Д39'17 14°Д40'44 18°Д59'42 16°Д57'24 16°Д55'09 14°Д52'58	17.74235 AU 19.71070 AU 0°11'18 0°11'19	direct max. Earth dist. conjunction minimum elong retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong retrograde	-812 Jan 13 j 23:28 -812 Mar 28 j 21:30 -812 Jul 18 j 01:52 -812 Jul 19 j 06:16 -812 Jul 19 j 06:16 -812 Nov 04 j 13:34 -811 Jan 16 j 22:22 -811 Jan 17 j 23:08 -811 Apr 02 j 22:08 -811 Jul 23 j 04:44 -811 Jul 24 j 10:06 -811 Jul 24 j 10:06 -811 Nov 09 j 14:19	12°S52'01 17°S21'155 17°S22'21 17°S22'21 21°S45'29 19°S42'58 19°S40'15 17°S36'36 22°S03'12 22°S07'47 22°S07'47 26°S31'13 24°S28'47	19.36951 AU 0°32'43 0°32'43 0°37'48 17.35531 AU 19.34169 AU 0°35'06 0°35'06

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	nical year style is used: T						
max. Earth dist.	-810 Jul 28 j 10:20	26°5549'52	19.31914 AU	minimum elong	-803 Sep 01 j 13:39	0° m ,28'41	0°44'29
				max. Earth dist.	-803 Aug 31 j 15:10	0° Mp 25'08	19.29991 AU
conjunction	-810 Jul 29 j 14:20	26°954'16	0°37'15	retrograde	-803 Dec 17 j 17:31	4° ™ 51'19	
minimum elong	-810 Jul 29 j 14:20	26° © 54'16	0°37'16	opposition	-802 Mar 01 j 11:06	2° Mp 49'20	0°49'33
	-810 Sep 21 j 20:55	$0^{\circ}\Omega$		min. Earth dist.	-802 Mar 02 j 06:58	2° mp 47'12	17.30906 AU
retrograde	-810 Nov 14 j 15:02	1° Ω 17'53		direct	-802 May 17 j 07:35	0° mp 42'57	
	-809 Jan 09 j 13:36	30°Rூ			,,,		
opposition	-809 Jan 26 j 22:04	29° © 15'34	0°42'37	conjunction	-802 Sep 06 j 14:57	5° m) 14'51	0°44'18
min. Earth dist.	-809 Jan 27 j 22:41		17.31019 AU	minimum elong	-802 Sep 06 j 14:57	5° Mp 14'51	0°44'18
direct	-809 Apr 13 j 03:06	27° 5 09'04	17.51017710	max. Earth dist.	-802 Sep 05 j 14:37		19.31896 AU
direct	-809 Jul 07 j 05:33	27 3 09 04 0° Ω			-802 Dec 22 j 17:53	9° Mp 37'01	19.31690 AU
	-809 Jul 07 J 03.33	0 86		retrograde		-	0040110
	000 4 02:10.20	10 0 41122	0020100	opposition	-801 Mar 06 j 13:22	7° Mp 35'06	0°49'10
conjunction	-809 Aug 03 j 18:30	1° Ω 41'33		min. Earth dist.	-801 Mar 07 j 06:39	-	17.33111 AU
minimum elong	-809 Aug 03 j 18:30	1° Ω 41'33		direct	-801 May 22 j 13:55	5° m 28'51	
max. Earth dist.	-809 Aug 02 j 13:34		19.30155 AU				
retrograde	-809 Nov 19 j 16:04	6° Ω 05'18		conjunction	-801 Sep 11 j 15:40	10° Mp 00'04	0°43'49
opposition	-808 Jan 31 j 22:53	4° Ω 03'04	0°44'35	minimum elong	-801 Sep 11 j 15:40	10° Mp 00'04	0°43'48
min. Earth dist.	-808 Feb 01 j 23:15	4° Ω 00′25	17.29510 AU	max. Earth dist.	-801 Sep 10 j 21:14	9° m 57'09	19.34417 AU
direct	-808 Apr 17 j 05:51	1° Ω 56'32		retrograde	-801 Dec 27 j 15:32	14° m 21'43	
				opposition	-800 Mar 10 j 15:57	12° m) 19'53	0°48'28
conjunction	-808 Aug 07 j 22:38	6° Ω 29'27	0°40'47	min. Earth dist.	-800 Mar 11 j 08:24	12° m 18'07	17.35950 AU
minimum elong	-808 Aug 07 j 22:38	6° Ω 29'27		direct	-800 May 26 j 16:48	10° m 13'51	
max. Earth dist.	-808 Aug 06 j 19:11		19.28877 AU	ancet	000 May 20 j 10.10	10 110 13 31	
retrograde	-808 Nov 23 j 17:50	10° Ω 53'13	17.20077 AU	conjunction	-800 Sep 15 j 15:27	14° m) 44'15	0°43'02
•			0046115	-			
opposition	-807 Feb 05 j 00:14	8° Ω 51'03		minimum elong	-800 Sep 15 j 15:27	14° Mp 44'15	0°43'03
min. Earth dist.	-807 Feb 06 j 00:08		17.28464 AU	max. Earth dist.	-800 Sep 14 j 22:36		19.37580 AU
direct	-807 Apr 22 j 09:44	6° Ω 44'30		retrograde	-800 Dec 31 j 15:36	19° m 05'21	
max. Earth dist.	-807 Aug 11 j 22:42	11° {\ 213'16	19.28074 AU	opposition	-799 Mar 15 j 18:16	17° m 03'39	0°47'26
				min. Earth dist.	-799 Mar 16 j 07:42		17.39411 AU
conjunction	-807 Aug 13 j 02:28	11° Ω 17'39	0°42'07	direct	-799 May 31 j 21:20	14° m 57'52	
minimum elong	-807 Aug 13 j 02:28	11° Ω 17'39	0°42'08				
	-807 Oct 21 j 04:42	15° Ω		conjunction	-799 Sep 20 j 14:43	19° m 27'22	0°41'59
retrograde	-807 Nov 28 j 18:05	15° Ω 41'22		minimum elong	-799 Sep 20 j 14:43	19° m 27'22	0°41'59
	-806 Jan 07 j 06:58	15°R Ω		max. Earth dist.	-799 Sep 20 j 00:52	19° m 25'11	19.41343 AU
opposition	-806 Feb 10 j 01:57	13° Ω 39'16	0°47'36	retrograde	-798 Jan 05 j 13:24	23°m/47'52	
min. Earth dist.	-806 Feb 11 j 01:40		17.27915 AU	opposition	-798 Mar 20 j 20:29	21° m) 46'19	0°46'05
direct	-806 Apr 27 j 12:18	11° Ω 32'41		min. Earth dist.	-798 Mar 21 j 08:58	•	17.43454 AU
direct	-806 Jul 31 j 17:07	15° Ω		direct	-798 Jun 05 j 23:19	19° m) 40'52	17.43434710
max. Earth dist.	-806 Aug 17 j 03:50		19.27771 AU	direct	-796 Juli 05 j 25.19	19 1104032	
max. Earm dist.	-800 Aug 17 J 05.50	10 860147	19.27771 AU		700 G 25 : 12 04	2.40 m, 00/2.1	0040120
	006 4 10:06 00	160 005156	0042110	conjunction	-798 Sep 25 j 13:04	24° Mp 09'21	0°40'39
conjunction	-806 Aug 18 j 06:00	16° Ω 05'56	0°43'10	minimum elong	-798 Sep 25 j 13:04	24° Mp 09'21	0°40'39
minimum elong	-806 Aug 18 j 06:00	16° Ω 05'56	0°43'10	max. Earth dist.	-798 Sep 25 j 00:28	24° Mp 07'22	19.45663 AU
retrograde	-806 Dec 03 j 19:55	20° Ω 29'29		retrograde	-797 Jan 10 j 12:53	28° m 29'13	
opposition	-805 Feb 15 j 03:56	18° Ω 27'26	0°48'36	opposition	-797 Mar 25 j 22:25	26° Mp 27'50	0°44'26
min. Earth dist.	-805 Feb 16 j 02:29	18° Ω 24'59	17.27848 AU	min. Earth dist.	-797 Mar 26 j 08:01	26° Mp 26'49	17.48010 AU
direct	-805 May 02 j 17:52	16° Ω 20'53		direct	-797 Jun 11 j 02:22	24° Mp 22'45	
max. Earth dist.	-805 Aug 22 j 07:25	20° Ω 49'57	19.27961 AU				
				conjunction	-797 Sep 30 j 10:48	28° Mp 50'06	0°39'03
conjunction	-805 Aug 23 j 09:08	20° Ω 54'01	0°43'55	minimum elong	-797 Sep 30 j 10:48	28° Mp 50'06	0°39'03
minimum elong	-805 Aug 23 j 09:08	20° Ω 54'01	0°43'56	max. Earth dist.	-797 Sep 30 j 01:23	28° Mp 48'38	19.50446 AU
retrograde	-805 Dec 08 j 18:41	25° Ω 17'21			-797 Oct 19 j 03:35	0∘ ⊽	
opposition	-804 Feb 20 j 06:09	23° Ω 15'20	0°49'16	retrograde	-796 Jan 15 j 10:05	3° ₾ 09'18	
min. Earth dist.	-804 Feb 21 j 04:30		17.28307 AU	opposition	-796 Mar 30 j 00:18	1° £ 08'06	0°42'30
direct	-804 May 06 j 21:18	21° Ω 08'47	17.20307 110	min. Earth dist.	-796 Mar 30 j 08:49		17.52996 AU
max. Earth dist.	-804 Aug 26 j 11:44		19.28698 AU	iiiii. Lattii dist.	-796 Apr 27 j 09:13	30°RM)	17.32770 AO
max. Earth dist.	-804 Aug 20 J 11.44	23 663133	19.20090 AU	1:4			
	004 4 27:11 47	250 0 41141	0044121	direct	-796 Jun 15 j 04:12	29° m 03'24	
conjunction	-804 Aug 27 j 11:47	25° Ω 41'41	0°44'21		-796 Aug 01 j 07:07	0∘ ⊽	
minimum elong	-804 Aug 27 j 11:47	25° Ω 41'41	0°44'21				
	-804 Nov 29 j 22:07	0° m)		conjunction	-796 Oct 04 j 07:37	3° ₾ 29'32	0°37'12
retrograde	-804 Dec 12 j 19:41	0° Mp 04'42		minimum elong	-796 Oct 04 j 07:37	3° ₽ 29'32	0°37'11
	-804 Dec 25 j 17:46	30° R Ω		max. Earth dist.	-796 Oct 03 j 23:13	3° ≏ 28'13	19.55635 AU
opposition	-803 Feb 24 j 08:33	28° Ω 02'42	0°49'35	retrograde	-795 Jan 19 j 08:36	7° ≏ 48'02	
min. Earth dist.	-803 Feb 25 j 04:55	28° Ω 00′29	17.29310 AU	opposition	-795 Apr 04 j 01:47	5° ≙ 47'00	0°40'18
		25° Ω 56′13		min. Earth dist.	-795 Apr 04 j 07:36	5° Ω 46'23	17.58361 AU
direct	-803 May 12 j 04:02	23 8630 13		iiiii. Laitii dist.	-175 Apr 0+ j 01.50	3 - 10 23	17.50501110
direct	-803 May 12 j 04:02 -803 Aug 25 j 00:17	0°m		direct	-795 Jun 20 j 06:05	3° - 42'41	17.50501710
direct							17.50501710
direct			0°44'29				0°35'07

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -795 in astronomical counting style is the year 796 BCE in historical counting style. -795 Oct 09 i 03:41 8°**2**07'30 0°35'07 minimum elong conjunction -787 Nov 13 i 11:32 14°ML05'11 0°12'23 -787 Nov 13 j 11:31 max. Earth dist. -795 Oct 08 j 22:29 8°**2**06'42 19.61155 AU minimum elong 14°ML05'11 0°12'23 -794 Jan 24 j 04:54 12°**£**25'14 behind sun begin -787 Nov 13 j 07:08 14°M04'31 retrograde -794 Apr 09 j 02:57 10°**♀**24'22 0°37'50 -787 Nov 13 j 15:55 14°ML05'50 opposition behind sun end -794 Apr 09 j 07:28 min. Earth dist. 10°**£**23'54 17.64011 AU max. Earth dist. -787 Nov 13 j 22:38 14°ML06'52 20.11987 AU -794 Jun 25 j 07:33 -787 Nov 28 j 13:23 direct 8°**₽**20'28 15°M 18°M16'04 -786 Mar 01 j 01:55 retrograde conjunction -794 Oct 13 j 22:51 12° 243'54 0°32'48 opposition -786 May 16 j 13:55 16°M₁5'59 0°11'55 -794 Oct 13 j 22:51 0°32'47 min. Earth dist. minimum elong 12°**£**43'54 -786 May 16 j 01:45 16°M17'14 18.15455 AU -794 Oct 13 j 18:30 max. Earth dist. 12°**2**43'13 19.66935 AU -786 Jun 19 j 00:46 15°RM -793 Jan 29 j 01:50 retrograde 17°**£**00′50 direct -786 Aug 01 j 17:38 14°M15'05 0°35'09 -793 Apr 14 j 03:27 -786 Sep 12 j 18:12 15°M₁ opposition 15°**£**00'06 -793 Apr 14 j 05:43 min. Earth dist. 14°**♀**59'52 17.69902 AU -793 Jun 30 j 08:21 direct 12°**⊆**56'35 conjunction -786 Nov 17 j 23:25 18°M25'56 0°09'08 minimum elong -786 Nov 17 j 23:25 18°M25'56 0°09'07 -793 Oct 18 j 17:20 conjunction 17°**△**18'34 0°30'18 behind sun begin -786 Nov 17 j 17:50 18°M25'06 -793 Oct 18 j 17:20 minimum elong 17°**≏**18'34 0°30'18 behind sun end -786 Nov 18 j 05:01 18° ML26'45max. Earth dist. -793 Oct 18 j 16:00 17°**≏**18'22 19.72923 AU max. Earth dist. -786 Nov 18 j 12:08 18°**M**ւ27'51 20.18977 AU retrograde -792 Feb 02 j 20:56 21°**△**34'41 retrograde -785 Mar 05 j 16:06 22° M $_{3}6'00$ opposition -792 Apr 18 j 03:41 19°**≏**34'05 0°32'15 opposition -785 May 21 j 09:03 20°M36'03 0°08'15 min. Earth dist. -792 Apr 18 j 04:16 19°**♀**34'01 17.75966 AU min. Earth dist. -785 May 20 j 19:40 20°M37'25 18.22492 AU direct -792 Jul 04 i 09:17 17°**△**30'58 direct -785 Aug 06 i 09:22 18°M35'34 conjunction -792 Oct 22 i 10:38 21°**♀**51'25 0°27'38 conjunction -785 Nov 22 j 10:42 22°M44'53 0°05'51 minimum elong -792 Oct 22 j 10:38 21°**♀**51'25 0°27'38 minimum elong -785 Nov 22 j 10:42 22°M44'53 0°05'50 max. Earth dist. -792 Oct 22 i 10:16 21°**♀**51'21 19.79073 AU behind sun begin -785 Nov 22 j 04:26 22°M43'57 retrograde -791 Feb 06 j 16:20 26°**£**06'41 behind sun end -785 Nov 22 j 16:57 22°M45'48 opposition -791 Apr 23 j 03:15 24°**£**06'11 0°29'10 max. Earth dist. -785 Nov 23 j 01:47 22°ML47'09 20.26040 AU min. Earth dist. -791 Apr 23 j 01:50 24°**£**06'19 retrograde -784 Mar 09 j 07:15 26°M54'09 17 82194 AU -791 Jul 09 j 08:37 -784 May 24 j 11:20 direct 22°**₽**03'25 min. Earth dist. 24°M55'59 18.29552 AU -784 May 25 j 03:25 opposition 24°M54'21 0°04'34 -791 Oct 27 j 03:12 -784 Aug 10 j 03:25 26°**△**22'18 0°24'48 22°M54'19 conjunction direct -791 Oct 27 j 03:12 minimum elong 26°**£**22'18 0°24'47 -791 Oct 27 j 05:48 -784 Nov 25 j 21:05 27°ML02'06 0°02'32 max. Earth dist. 26°**£**22'42 19.85370 AU conjunction -790 Jan 05 j 04:26 -784 Nov 25 j 21:06 27°ML02'06 0°02'31 0°M minimum elong -790 Feb 11 j 09:33 -784 Nov 25 j 14:34 0°M36'41 behind sun begin 27°ML01'09 retrograde -790 Mar 21 j 20:58 -784 Nov 26 j 03:37 behind sun end 27°ML03'03 opposition -790 Apr 28 j 01:55 28°**2**36'16 0°25'56 max. Earth dist. -784 Nov 26 j 13:44 27°ML04'36 20.33082 AU min. Earth dist. -790 Apr 27 j 22:30 28°**♀**36'37 17.88546 AU -783 Jan 19 j 14:34 0°**∡**¹ -790 Jul 14 j 08:23 direct 26°**♀**33'51 retrograde -783 Mar 13 j 20:36 1°×10'36 -790 Oct 17 j 21:16 0°M -783 May 09 j 02:36 30°RM opposition -783 May 29 j 21:12 29°M10'57 0°00'53 conjunction -790 Oct 31 j 18:39 0°M51'08 0°21'50 min. Earth dist. -783 May 29 j 04:24 29°M12'39 18.36572 AU minimum elong -790 Oct 31 j 18:39 0°M51'08 0°21'50 direct -783 Aug 14 j 17:38 27°M11'20 max. Earth dist. -790 Oct 31 j 22:26 0°M51'43 19.91796 AU desc. node -783 Aug 27 j 16:25 27°M15'37 -789 Feb 16 i 02:57 5°ML04'39 -783 Nov 08 j 09:18 retrograde 0°**∡**¹ -789 May 03 i 00:05 opposition 3°ML04'16 0°22'34 -789 May 02 j 18:54 -783 Nov 30 i 07:04 1°**∡**17'40 0°00'-52 min. Earth dist. 3°ML04'49 17.95050 AU conjunction -789 Jul 19 i 05:34 -783 Nov 30 i 07:04 direct 1°ML02'13 minimum elong 1°**∡**17'40 0°00'53 -783 Nov 30 i 00:32 behind sun begin 1°**х** 16'42 -789 Nov 05 i 09:10 -783 Nov 30 i 13:35 conjunction 5°ML17'52 0°18'46 behind sun end 1°**∡**18'37 minimum elong -789 Nov 05 i 09:10 5°**M**₁7'52 0°18'45 max. Earth dist. -783 Dec 01 i 01:30 1° ₹ 20'25 20.40049 AU max. Earth dist. -789 Nov 05 j 15:58 5°ML18'54 19.98371 AU retrograde -782 Mar 18 j 10:50 5°**х** 25′24 3°**₹**25'54 0°-2'-45 -788 Feb 20 i 18:54 -782 Jun 03 j 13:55 retrograde 9°M30'29 opposition -788 May 06 j 21:29 opposition 7°M30'12 0°19'05 min. Earth dist. -782 Jun 02 j 18:46 3°**҂**27'50 18.43462 AU -782 Aug 19 j 10:01 min. Earth dist. -788 May 06 j 13:42 7°M31'00 18.01695 AU direct 1°×726'42 direct -788 Jul 23 j 03:29 5°M28'30 -782 Dec 04 j 16:21 5°**∡**'31'36 0°-4'-11 conjunction -788 Nov 08 j 22:44 9°M42'31 0°15'36 minimum elong -782 Dec 04 j 16:22 5°**∡**31'36 0°04'13 conjunction -788 Nov 08 j 22:44 0°15'36 behind sun begin -782 Dec 04 j 09:55 5°**х**³30′40 minimum elong 9°ML42'31 -788 Nov 08 j 20:48 -782 Dec 04 j 22:48 5°**∡**³32'33 behind sun begin 9°M42'14 behind sun end -788 Nov 09 j 00:40 behind sun end 9°M42'49 max. Earth dist. -782 Dec 05 j 12:03 5°**х** 34'33 20.46840 AU -788 Nov 09 j 07:05 -781 Mar 22 j 23:26 max. Earth dist. 9°M43'47 20.05098 AU retrograde 9°**∡**38'38 -787 Feb 24 j 10:27 retrograde 13°M54'17 min. Earth dist. -781 Jun 07 j 10:54 7°**≯**41'13 18.50157 AU opposition -787 May 11 j 18:09 11°M54'04 0°15'32 opposition -781 Jun 08 j 06:18 7°**∡**³39'15 0°-6'-23 min. Earth dist. -787 May 11 j 08:44 11°M55'02 18.08513 AU direct -781 Aug 23 j 23:05 5°**х¹**40'27

-787 Jul 27 j 21:47

direct

9°M52'45

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -781 in astronomical counting style is the year 782 BCE in historical counting style. 9°**×**⁷43'58 0°-7'-26 -781 Dec 09 i 01:03 max. Earth dist. -773 Jan 07 i 03:10 8°る31'43 20.89641 AU conjunction -781 Dec 09 i 01:02 9°×743'57 0°07'27 retrograde -773 Apr 25 j 11:13 12°る30'15 minimum elong opposition behind sun begin -781 Dec 08 j 19:04 9°**х** 43′05 -773 Jul 12 j 13:59 10°る31'04 0°-31'-56 -781 Dec 09 j 07:01 9°**х** 44'49 min. Earth dist. -773 Jul 11 j 12:26 10°る33'37 18.91662 AU behind sun end 9°**х** 47′05 20.53406 AU -773 Sep 26 j 16:15 -781 Dec 09 j 22:02 8°**る**34'11 max. Earth dist. direct -780 Mar 26 j 12:32 13°**∡** 50'17 retrograde -780 Jun 11 j 21:49 11°**∡**°51′01 0°-9'-57 -772 Jan 10 j 05:30 12°**る**28'55 0°-30'-3 opposition conjunction -780 Jun 11 j 00:16 -772 Jan 10 j 05:30 0°30'04 min. Earth dist. 11°**尽**53'11 18.56577 AU minimum elong 12°**る**28'55 -780 Aug 27 j 14:05 -772 Jan 11 j 08:43 20.93536 AU direct 9°**х** 52′34 max. Earth dist. 12°**る**32'52 retrograde -772 Apr 28 j 21:37 16°**ප**31'02 14°る31'52 conjunction -780 Dec 12 j 09:18 13°**∡** 54'45 0°-10'-36 opposition -772 Jul 15 j 23:55 0°-34'-29 -780 Dec 12 j 09:18 13°**∡**¹54'45 -772 Jul 14 j 20:57 14°る34'34 18.95404 AU minimum elong 0°10'38 min. Earth dist. -780 Dec 12 j 04:11 13°**₹**′54′01 -772 Sep 30 j 00:54 12°る35'10 behind sun begin direct behind sun end -780 Dec 12 j 14:25 13°**х** 55′29 max. Earth dist. -780 Dec 13 j 07:17 13°**₹**58'00 20.59656 AU conjunction -771 Jan 13 j 10:37 16°る29'13 0°-32'-17 retrograde -779 Mar 30 j 23:52 18°**≯**00'25 minimum elong -771 Jan 13 j 10:37 16°**る**29'13 0°32'18 opposition -779 Jun 16 j 12:39 16°**∡**′01'13 0°-13'-27 max. Earth dist. -771 Jan 14 j 14:35 16°る33'16 20.97107 AU min. Earth dist. -779 Jun 15 j 15:17 16°**∡**03'21 18.62667 AU retrograde -771 May 03 j 04:37 20°る31'03 direct -779 Sep 01 j 02:06 14°**₹**03'04 min. Earth dist. -771 Jul 19 j 07:03 18°る34'33 18.98813 AU opposition -771 Jul 20 j 09:17 18°る31'56 0°-36'-51 conjunction -779 Dec 16 j 17:04 18°**₹**'03'59 0°-13'-43 direct -771 Oct 04 j 06:58 16°る35'25 minimum elong -779 Dec 16 j 17:04 18°**х** 03′59 0°13'45 behind sun begin -779 Dec 16 i 13:27 18°**х** 03′27 conjunction -770 Jan 17 j 15:35 20°**る**28'52 0°-34'-21 behind sun end -779 Dec 16 j 20:40 18°**≯**04'30 minimum elong -770 Jan 17 i 15:35 20°る28'52 0°34'22 max. Earth dist. -779 Dec 17 i 15:47 18°**✗**07'20 20.65559 AU max. Earth dist. -770 Jan 18 j 19:31 20°る32'53 21.00344 AU -778 Apr 04 j 11:56 22°×708'59 retrograde -770 May 07 j 14:25 24°る30'29 retrograde -778 Jun 20 j 03:26 20° ₹12'09 18.68374 AU opposition -770 Jul 24 j 18:11 22°る31'24 0°-39'-2 min. Earth dist. opposition -778 Jun 21 j 02:37 20°**₹**'09'50 0°-16'-52 min. Earth dist. -770 Jul 23 j 14:58 22°る34'07 19.01860 AU -778 Sep 05 j 15:11 18°**∡**11'57 direct -770 Oct 08 j 14:28 20°る35'04 direct -778 Dec 21 j 00:10 22°**∡**11'38 0°-16'-45 -769 Jan 21 j 20:24 24°る28'00 0°-36'-15 conjunction conjunction -778 Dec 21 j 00:10 -769 Jan 21 j 20:23 0°16'46 minimum elong 24°る28'00 0°36'17 minimum elong 22°**₹**11'38 -778 Dec 21 j 23:47 22°**∡**15′07 -769 Jan 23 j 00:49 24°る32'05 21.03181 AU max. Earth dist. 20.71062 AU max. Earth dist. -777 Apr 08 j 21:25 -769 May 11 j 21:30 28°る29'28 26°**х** 16′02 retrograde retrograde -777 Jun 25 j 16:03 min. Earth dist. -769 Jul 28 j 00:38 26°る33'03 19.04491 AU 24°**₹**16'53 0°-20'-9 opposition -769 Jul 29 j 02:52 -777 Jun 24 j 17:11 24° ₹ 19'11 18.73694 AU 26°る30'26 0°-41'-2 min. Earth dist. opposition -777 Sep 10 j 02:18 22°**х¹**19'15 -769 Oct 12 j 19:57 24°**⋜**34'16 direct direct 26°**₹**17'46 0°-19'-40 conjunction -777 Dec 25 j 06:52 conjunction -768 Jan 26 j 01:23 28°る26'46 0°-37'-58 minimum elong -777 Dec 25 j 06:52 26°**∡**17'46 0°19'42 minimum elong -768 Jan 26 j 01:23 28°る26'46 0°37'59 max. Earth dist. -777 Dec 26 j 07:09 26°**✗**¹21'20 20.76203 AU max. Earth dist. -768 Jan 27 j 05:21 28°る30'47 21.05599 AU -776 Mar 13 j 17:05 0°궁 -768 Feb 22 j 19:54 0°≈ -776 Apr 12 j 08:51 0°**궁**21'35 retrograde -768 May 15 j 06:42 2°≈28'09 retrograde -776 May 12 j 13:40 30°R*x*7 min. Earth dist. -768 Jul 31 j 08:15 0°≈31'48 19.06674 AU min. Earth dist. -776 Jun 28 j 03:54 28°**✗¹**24'53 18.78659 AU -768 Aug 01 j 10:58 0°≈29'08 0°-42'-50 opposition -776 Jun 29 i 04:32 28°**҂**¹22'25 -768 Aug 13 j 17:36 30°Rる opposition 0°-23'-19 -776 Sep 13 j 13:30 26°**х** 24′58 -768 Oct 16 i 02:24 28°る33'04 direct direct -776 Dec 22 j 03:42 0°ರ -768 Dec 14 j 19:44 0°≈ -776 Dec 28 i 13:01 0°る22'24 0°-22'-28 conjunction -767 Jan 29 i 06:31 2°≈25'15 0°-39'-30 conjunction minimum elong -776 Dec 28 i 13:01 0°る22'24 0°22'29 minimum elong -767 Jan 29 i 06:31 2°≈25'15 0°39'33 -776 Dec 29 j 14:18 max. Earth dist. 0°る26'06 20.80988 AU max. Earth dist. -767 Jan 30 i 10:26 2°≈29'15 21.07519 AU retrograde -775 Apr 16 j 17:01 4°₹25'43 retrograde -767 May 19 j 14:03 6°≈26'35 -775 Jul 03 j 16:26 2°පි26'32 0°-26'-21 -767 Aug 05 j 18:53 opposition opposition 4°≈27'35 0°-44'-25 min. Earth dist. -775 Jul 02 j 16:09 2°る28'57 18.83291 AU min. Earth dist. -767 Aug 04 j 17:34 4°≈30'06 19.08333 AU -775 Sep 17 j 22:59 0°**ප**29'16 -767 Oct 20 j 07:20 direct direct 2°≈31'36 -774 Jan 01 j 18:52 4°る25'42 0°-25'-8 -766 Feb 02 j 11:45 6°≈23'31 0°-40'-51 conjunction conjunction -766 Feb 02 j 11:45 -774 Jan 01 j 18:52 4°る25'42 0°25'10 minimum elong minimum elong 6°≈23'31 0°40'53 -766 Feb 03 j 14:39 -774 Jan 02 j 20:42 4°る29'28 20.85466 AU 6°≈27'22 21.08905 AU max. Earth dist. max. Earth dist. -774 Apr 21 j 03:49 8°る28'32 -766 May 23 j 22:38 retrograde retrograde 10°≈24'50 -774 Jul 07 j 01:26 min. Earth dist. 6°る31'56 18.87623 AU min. Earth dist. -766 Aug 09 j 00:57 8°≈28'21 19.09433 AU opposition -774 Jul 08 j 03:22 6°**る**29'20 0°-29'-13 opposition -766 Aug 10 j 02:20 8°**≈**25'48 0°-45'-48 direct -774 Sep 22 j 08:42 4°る32'15 direct -766 Oct 24 j 13:20 6°≈29'51 -773 Jan 06 j 00:21 8°る27'49 0°-27'-40 -765 Feb 06 j 17:10 10°**≈**21'36 0°-42'00 conjunction conjunction

-773 Jan 06 j 00:21

minimum elong

8°る27'49 0°27'41

-765 Feb 06 j 17:10

minimum elong

10°**≈**21'36

0°42'02

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -765 in astronomical counting style is the year 766 BCE in historical counting style. -765 Feb 07 i 19:39 10°≈25'22 21.09708 AU -757 Mar 10 j 20:35 max. Earth dist. conjunction 12°**)**€06'20 0°-43'-39 minimum elong retrograde -765 May 28 i 05:46 14°≈22'56 -757 Mar 10 j 20:35 12°¥06'20 0°43'40 min. Earth dist. -765 Aug 13 j 09:53 12°≈26'13 19.09945 AU max. Earth dist. -757 Mar 11 j 15:28 12°**₭**09'01 20.98671 AU -765 Aug 14 j 09:42 -757 Jun 29 j 23:18 16°**¥**09'37 opposition 12°≈23'50 0°-46'-57 retrograde -765 Oct 28 j 17:48 direct -757 Sep 15 j 12:19 14° **₩** 09'36 0°-47'-51 10°≈27'52 opposition -757 Sep 14 j 20:24 14°**₭**11'13 18.97201 AU min. Earth dist. -757 Nov 29 j 06:58 12°**ℋ**12'36 -764 Feb 10 j 22:40 14°≈19'29 0°-42'-57 conjunction direct -764 Feb 10 j 22:39 0°42'58 minimum elong 14°≈19'29 -764 Feb 11 j 23:53 conjunction -756 Mar 14 j 04:57 16°**₭**06'37 0°-42'-54 max. Earth dist. 14°≈23'05 21.09944 AU -756 Mar 14 j 04:57 -764 Feb 22 j 19:48 15°≈ minimum elong 16°**)**€06'37 0°42'55 -756 Mar 14 j 21:52 retrograde -764 May 31 j 14:29 18°≈20'52 max. Earth dist. 16°**米**09'01 20.95593 AU -764 Aug 17 j 16:39 -756 Jul 03 j 10:12 20°**₭**10′25 opposition 16°≈21'40 0°-47'-53 retrograde min. Earth dist. -764 Aug 16 j 17:02 -756 Sep 18 j 18:38 18°**¥** 10′21 0°-46'-54 16°≈24'02 19.09892 AU opposition -764 Sep 24 j 05:18 -756 Sep 18 j 03:39 15°R≈ min. Earth dist. 18°**光**11'53 18.93933 AU -764 Oct 31 j 23:34 direct 14°≈25'37 direct -756 Dec 02 j 12:11 16°**¥**13'12 -764 Dec 07 j 17:10 15°≈ conjunction -755 Mar 18 j 14:06 20°**)**€07'58 0°-41'-56 conjunction -763 Feb 14 j 04:25 18°≈17'12 0°-43'-41 minimum elong -755 Mar 18 j 14:07 20°**)**€07'58 0°41'58 minimum elong -763 Feb 14 j 04:25 18°**≈**17'12 0°43'42 max. Earth dist. -755 Mar 19 j 06:01 20°¥10'14 20.92127 AU max. Earth dist. -763 Feb 15 j 05:09 18°**≈**20'43 21.09612 AU retrograde -755 Jul 07 j 19:12 24°¥12'21 retrograde -763 Jun 04 j 21:04 22°≈18'40 opposition -755 Sep 23 j 01:05 22°**)** 12'13 0°-45'-44 opposition -763 Aug 21 j 23:13 20°≈19'21 0°-48'-35 min. Earth dist. -755 Sep 22 j 12:08 22°\dagger13'33 18.90265 AU min. Earth dist. -763 Aug 21 j 01:18 20°≈21'33 19.09301 AU direct -755 Dec 06 j 16:41 20°\ 14'56 direct -763 Nov 05 i 03:39 18°≈23'11 conjunction -754 Mar 22 i 23:53 24°**)** 10'33 0°-40'-46 -762 Feb 18 j 10:17 22°≈14'49 0°-44'-12 minimum elong -754 Mar 22 j 23:53 24°**₩**10'33 0°40'47 conjunction -762 Feb 18 i 10:17 22°≈14'49 0°44'14 max. Earth dist. -754 Mar 23 i 13:19 24°¥12'28 20.88269 AU minimum elong max. Earth dist. -762 Feb 19 j 09:44 22°≈18'09 21.08791 AU retrograde -754 Jul 12 j 07:12 28°¥15'33 -762 Jun 09 j 05:59 26°≈16'25 opposition -754 Sep 27 j 07:54 26°\ 15'21 0°-44'-20 retrograde -762 Aug 25 j 07:57 24°≈19'08 19.08248 AU -754 Sep 26 j 20:16 min. Earth dist. min. Earth dist. 26°¥16'33 18.86190 AU -762 Aug 26 j 05:37 -754 Dec 10 j 22:55 direct 24° ¥ 17'51 opposition 24°≈16'57 0°-49'-2 -762 Nov 09 j 08:54 22°≈20'40 direct -753 Mar 27 j 10:23 28° **)** 14'24 0°-39'-23 conjunction -761 Feb 22 j 16:16 -753 Mar 27 j 10:23 26°≈12'25 0°-44'-31 minimum elong 28° **)** 14'24 0°39'24 conjunction -761 Feb 22 j 16:16 -753 Mar 27 j 22:34 26°≈12'25 0°44'32 max. Earth dist. 28° ¥ 16'08 20.83965 AU minimum elong max. Earth dist. -761 Feb 23 j 15:23 -753 Apr 28 j 03:20 $0^{\circ}\Upsilon$ 26°≈15'43 21.07513 AU -761 May 20 j 06:35 -753 Jul 16 j 17:18 2°Y20'03 0°**)**€ retrograde retrograde -761 Jun 13 j 12:47 0°\ 14'15 opposition -753 Oct 01 j 15:04 0°Υ19'46 0°-42'-41 -761 Jul 08 j 03:23 30°R≈ min. Earth dist. -753 Oct 01 j 05:38 0°**Υ**20'45 18.81652 AU -761 Aug 30 j 11:56 opposition 28°≈14'38 0°-49'-16 -753 Oct 09 j 15:24 30°**₹**₩ min. Earth dist. -761 Aug 29 j 15:48 28°≈16'40 19.06765 AU direct -753 Dec 15 j 04:06 28°**¥**22′02 direct -761 Nov 13 j 13:01 26°≈18'12 -752 Feb 16 j 19:01 $0^{\circ}\Upsilon$ -760 Feb 23 j 23:04 0°**)**€ conjunction -752 Mar 30 j 21:45 2°**Y**19'34 0°-37'-48 conjunction -760 Feb 26 j 22:43 0°**)** 10'12 0°-44'-37 minimum elong -752 Mar 30 j 21:45 2°**Y**19'34 0°37'48 -760 Feb 26 i 22:43 0°**升**10'12 0°44'39 -752 Mar 31 i 06:58 2°**Υ**20'53 20.79212 AU minimum elong max. Earth dist. -760 Feb 27 i 20:28 0°**)** 13'18 21.05847 AU -752 Jul 20 i 05:53 6°**Y**25'53 max. Earth dist. retrograde -760 Jun 16 j 21:58 4°**)** 12'17 -752 Oct 04 i 22:24 4°Υ25'29 0°-40'-50 retrograde opposition -760 Sep 02 j 17:56 2°\(\mathbf{1}\)2'33 0°-49'-15 -752 Oct 04 i 14:39 4°**Υ**26'17 18.76668 AU opposition min. Earth dist. -760 Sep 01 i 22:12 2°**Y**27'27 min. Earth dist. 2°¥14'33 19.04911 AU direct -752 Dec 18 j 11:41 direct -760 Nov 16 j 17:43 0° **X** 15'58 conjunction -751 Apr 04 j 09:54 6°Y26'02 0°-36'00 conjunction -759 Mar 02 i 05:37 4°¥08'19 0°-44'-30 minimum elong -751 Apr 04 j 09:55 6°Y26'02 0°36'01 -759 Mar 02 i 05:37 4°**₩**08'19 0°44'31 -751 Apr 04 j 17:41 6°Υ27'09 20.74003 AU minimum elong max. Earth dist. -759 Mar 03 j 02:48 4°**)** 11'20 21.03801 AU -751 Jul 24 j 16:50 10°**Ƴ**33'02 max. Earth dist. retrograde -759 Jun 21 j 05:25 8°**)** 10'44 -751 Oct 09 j 06:10 8°**Υ**32'29 0°-38'-45 retrograde opposition 8°**Υ**33'04 18.71244 AU -759 Sep 06 j 05:54 min. Earth dist. 6°**)** 12'43 19.02684 AU min. Earth dist. -751 Oct 09 j 00:34 opposition -759 Sep 07 j 00:02 6°**)** 10'53 0°-49'-1 direct -751 Dec 22 j 18:17 6°Y34'08 direct -759 Nov 20 j 21:57 4°**)** 14′10 -750 Apr 08 j 22:28 10°Υ33'48 0°-34'-1 conjunction -758 Mar 06 j 12:45 8°**∺**06'58 0°-44'-11 -750 Apr 08 j 22:28 10°**Ƴ**33'48 0°34'02 conjunction minimum elong -758 Mar 06 j 12:45 -750 Apr 09 j 03:18 10°**Y**34'29 20.68404 AU minimum elong 8°**)**€06'58 0°44'12 max. Earth dist. -758 Mar 07 j 08:20 -750 Jul 29 j 05:32 max. Earth dist. 8°**¥**09'45 21.01411 AU retrograde 14°**Y**41'31 -758 Jun 25 j 15:07 retrograde 12°**)** 09'47 opposition -750 Oct 13 j 14:15 12°**Y**40'46 0°-36'-27 opposition -758 Sep 11 j 06:06 10° **★**09'50 0°-48'-33 min. Earth dist. -750 Oct 13 j 10:20 12°**Υ**41'11 18.65468 AU min. Earth dist. -758 Sep 10 j 12:29 10°**)** 11'38 19.00119 AU direct -750 Dec 27 j 02:41 10°**Y**42′03

-758 Nov 25 j 02:35

direct

8°**¥**12'58

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -749 in astronomical counting style is the year 750 BCE in historical counting style. -749 Apr 13 j 12:01 14°**Υ**'42'53 0°-31'-50 -742 Sep 01 i 22:37 conjunction retrograde 18°**8**44'28 minimum elong -749 Apr 13 i 12:01 14°**Y**42'53 0°31'51 opposition -742 Nov 15 j 23:47 16°842'39 0°-11'-42 max. Earth dist. -749 Apr 13 j 15:40 14°**Υ**43'25 20.62470 AU min. Earth dist. -742 Nov 16 j 09:26 16°**8**41'37 18.13808 AU -749 Aug 02 j 17:32 18°**Y**51'19 -741 Jan 02 j 15:26 15°R\ retrograde 16°**Υ**50'23 0°-33'-57 -749 Oct 17 j 22:35 -741 Jan 29 j 17:34 14°**8**40'57 opposition direct -749 Oct 17 j 20:36 -741 Feb 25 j 14:31 16°**Y**50'36 18.59392 AU 15°8 min. Earth dist. -749 Dec 31 j 11:08 14°**Y**51'18 direct -741 May 19 j 05:08 18°**8**53'13 0°-8'-55 conjunction 0°08'56 -748 Apr 17 j 02:13 18°Υ′53'21 0°-29'-29 -741 May 19 j 05:07 18°**8**53'13 conjunction minimum elong -748 Apr 17 j 02:13 -741 May 18 j 23:22 18°**8**52'23 minimum elong 18°**Y**53'21 0°29'30 behind sun begin -748 Apr 17 j 02:50 18°**8**54'03 max. Earth dist. 18°**Y**53'26 20.56288 AU behind sun end -741 May 19 j 10:53 -748 Aug 06 j 06:21 23°**Y**02'32 -741 May 18 j 17:06 18°**8**51'26 20.10537 AU retrograde max. Earth dist. -748 Oct 21 j 07:24 21°Υ01'25 0°-31'-15 -741 Sep 06 j 16:40 23°**8**08'12 opposition retrograde -748 Oct 21 j 07:09 -741 Nov 20 j 12:47 min. Earth dist. 21°**Υ**01'26 18.53107 AU opposition 21°**8**06'22 0°-7'-59 -747 Jan 03 j 20:02 direct 19°**Y**01'55 min. Earth dist. -741 Nov 20 j 23:45 21°805'11 18.07228 AU direct -740 Feb 03 j 08:18 19°**8**04'19 conjunction -747 Apr 21 j 17:16 23°**Y**05'16 0°-26'-57 max. Earth dist. -740 May 22 j 11:00 23°815'54 20.03946 AU minimum elong -747 Apr 21 j 17:16 23°**Y**'05'16 0°26'57 max. Earth dist. -747 Apr 21 j 16:54 23°Υ05'13 20.49906 AU conjunction -740 May 23 j 02:25 23°**8**18'11 0°-5'-34 retrograde -747 Aug 10 j 19:42 27°**Y**15′12 minimum elong -740 May 23 j 02:24 23°**8**18'11 0°05'34 opposition -747 Oct 25 j 16:36 25°**Y**13'55 0°-28'-22 behind sun begin -740 May 22 j 19:53 23°817'14 min. Earth dist. -747 Oct 25 i 17:58 25°**Y**13'46 18.46653 AU behind sun end -740 May 23 i 08:55 23°819'08 direct -746 Jan 08 j 06:20 23°Y14'02 retrograde -740 Sep 10 j 10:19 27°834'02 opposition -740 Nov 24 i 02:50 25°**8**32'08 0°-4'-12 conjunction -746 Apr 26 i 08:57 27°**Y**18'43 0°-24'-16 min. Earth dist. -740 Nov 24 j 16:13 25°830'42 18.00633 AU minimum elong -746 Apr 26 i 08:57 27°**Y**18'43 0°24'17 direct -739 Feb 06 j 23:10 23°829'43 max. Earth dist. -746 Apr 26 i 05:34 27°Υ18'14 20.43411 AU max. Earth dist. -739 May 27 j 08:05 27°842'44 19.97330 AU -746 Jun 15 j 04:59 0°8 -746 Aug 15 j 08:51 1°829'28 conjunction -739 May 28 j 00:33 27°**8**45'12 0°-2'-7 retrograde -746 Oct 17 j 08:12 -739 May 28 j 00:33 30°RY minimum elong 27°**8**45'12 0°02'07 -746 Oct 30 j 02:23 29°**Y**28'01 0°-25'-20 -739 May 27 j 17:45 behind sun begin 27°**8**44'12 opposition -746 Oct 30 j 05:26 29°**Υ**27'41 18.40124 AU -739 May 28 j 07:20 min. Earth dist. behind sun end 27°846'11 27°**Y**27'43 -739 Jul 06 j 08:15 -745 Jan 12 j 16:18 $\Pi^{\circ}0$ direct -745 Apr 03 j 16:57 -739 Sep 15 j 05:58 0°8 retrograde 2°II01'51 -739 Nov 28 j 17:31 29°**8**59'54 0°00'-21 opposition -745 May 01 j 01:35 1°833'50 0°-21'-27 -739 Nov 28 j 16:32 30°₹8 conjunction -745 May 01 j 01:35 -739 Nov 29 j 07:57 1°**8**33'50 0°21'27 min. Earth dist. 29°**8**58'20 17.94010 AU minimum elong max. Earth dist. -745 Apr 30 j 21:24 1°**8**33'14 20.36848 AU asc. node -738 Jan 03 j 12:14 28°**8**35'55 -738 Feb 11 j 16:11 retrograde -745 Aug 19 j 23:38 5°**8**45'24 direct 27°**8**57'05 -745 Nov 03 j 12:45 3°**8**43'49 0°-22'-8 opposition -738 Apr 23 j 23:17 $\Pi^{\circ}0$ 3°**8**43'21 18.33538 AU min. Earth dist. -745 Nov 03 j 17:11 direct -744 Jan 17 j 04:01 1°843'10 conjunction -738 Jun 01 j 23:23 2°II14'08 0°01'27 minimum elong -738 Jun 01 j 23:24 2°**Ⅱ**14′08 0°01'27 -744 May 04 j 19:03 5°850'44 0°-18'-29 behind sun begin -738 Jun 01 j 16:37 2°**Ⅱ**13'09 conjunction -744 May 04 j 19:03 5°**8**50'44 0°18'29 behind sun end -738 Jun 02 j 06:12 2°**Ⅱ**15′08 minimum elong -744 May 04 j 11:46 5°849'40 20.30261 AU max. Earth dist. -738 Jun 01 i 03:50 2°**Д**11'12 19.90710 AU max. Earth dist. -744 Aug 23 j 14:06 10°**8**03'08 -738 Sep 20 i 00:22 6°**耳**31'36 retrograde retrograde -744 Nov 06 j 23:40 8°**8**01'27 0°-18'-47 -738 Dec 03 i 09:01 4°II29'33 0°03'30 opposition opposition -744 Nov 07 i 05:58 8°**と**00'47 18.26953 AU -738 Dec 04 i 01:55 4°**Д**27'43 17.87416 AU min. Earth dist. min. Earth dist. -743 Jan 20 j 15:30 -737 Feb 16 j 08:34 2°**Ⅱ**26'19 direct 6°800'25 direct conjunction 6°**Ⅱ**44'57 0°04'58 -743 May 09 i 13:35 10°809'31 0°-15'-24 -737 Jun 06 i 23:08 conjunction minimum elong -743 May 09 j 13:35 10°**8**09'31 0°15'25 -737 Jun 06 j 23:09 6°**Ⅱ**44'57 0°04'59 minimum elong -743 May 09 j 12:12 10°**8**09'20 -737 Jun 06 j 16:33 6°**Ⅱ**43'59 behind sun begin behind sun begin -743 May 09 j 14:58 10°**8**09'43 -737 Jun 07 j 05:45 6°**Ⅱ**45'55 behind sun end behind sun end 10°**8**08'21 20.23677 AU 6°**Ц**41'50 19.84143 AU -743 May 09 j 05:32 -737 Jun 06 j 02:31 max. Earth dist. max. Earth dist. -743 Aug 28 j 06:23 -737 Sep 24 j 21:44 11°**II**03'08 retrograde 14°**8**22'46 retrograde -737 Dec 08 j 01:11 opposition -743 Nov 11 j 11:20 12°**8**21'02 0°-15'-18 opposition 9°II01'00 0°07'23 min. Earth dist. -743 Nov 11 j 18:52 12°**8**20'14 18.20370 AU min. Earth dist. -737 Dec 08 j 18:50 8°**Д**59'05 17.80887 AU direct -742 Jan 25 j 04:30 10°**8**19'40 direct -736 Feb 21 j 03:49 6°**Ⅱ**57'22 -742 May 14 j 08:41 14°**8**30'19 0°-12'-13 -736 Jun 10 j 23:29 11°**Ⅲ**17'31 conjunction conjunction 0°08'26 -742 May 14 j 08:41 14°**8**30'19 -736 Jun 10 j 23:29 minimum elong 0°12'13 minimum elong 11°**Ⅲ**17′31 0°08'26 -742 May 14 j 04:16 14°829'41 -736 Jun 10 j 17:34 behind sun begin behind sun begin 11°**Ⅱ**16′38 14°830'58 behind sun end -742 May 14 j 13:07 behind sun end -736 Jun 11 j 05:25 11°**Ⅱ**18′23 max. Earth dist. -742 May 13 j 21:34 14°**8**28'41 20.17106 AU max. Earth dist. -736 Jun 10 j 00:20 11°**Ц**14'01 19.77670 AU -742 May 22 j 17:37 15°₩ retrograde -736 Sep 28 j 16:43 15°**Ⅲ**36′25

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -736 in astronomical counting style is the year 737 BCE in historical counting style. -736 Dec 11 j 18:09 13°**II**34'11 0°11'15 -728 Jul 19 i 19:44 opposition conjunction 18°933'40 0°33'03 minimum elong -728 Jul 19 i 19:44 min. Earth dist. -736 Dec 12 i 14:08 13°**Ⅲ**32'01 17.74507 AU 18°933'40 0°33'03 -735 Feb 24 j 21:35 11°**Ⅲ**30′08 max. Earth dist. -728 Jul 18 j 15:40 18°529'17 19.38297 AU direct max. Earth dist. -735 Jun 15 j 00:24 15°**耳**48'07 19.71392 AU -728 Nov 05 j 03:28 retrograde 22°956'43 -727 Jan 17 j 12:17 20°954'22 0°38'09 opposition -735 Jun 16 j 00:28 15°**I**I51'46 0°11'52 -727 Jan 18 j 13:01 conjunction min. Earth dist. 20°951'39 17.36900 AU -735 Jun 16 j 00:28 15°**Ⅱ**51'46 0°11'53 -727 Apr 03 j 11:47 minimum elong direct 18°9548'11 behind sun begin -735 Jun 15 j 19:51 15°**Ⅲ**51'05 -735 Jun 16 j 05:04 15°**Ⅲ**52'27 -727 Jul 24 j 23:41 behind sun end conjunction 23°**©**19'14 0°35'23 -727 Jul 24 j 23:40 -735 Oct 03 j 15:22 retrograde 20°**Ⅲ**11'21 minimum elong 23°9519'14 0°35'25 -727 Jul 23 j 18:29 -735 Dec 16 j 11:46 opposition 18°**耳**09'00 0°15'03 max. Earth dist. 23°9514'40 19.35544 AU min. Earth dist. -735 Dec 17 j 08:00 18°**Д**06'48 17.68349 AU -727 Nov 10 j 04:26 retrograde 27°5942'34 -734 Mar 01 j 18:25 16°**Ⅲ**04'34 -726 Jan 22 j 11:45 direct opposition 25°**5**40'17 0°40'39 -734 Jun 20 j 00:08 max. Earth dist. 20°**Ⅲ**23'43 19.65364 AU min. Earth dist. -726 Jan 23 j 12:02 25°537'38 17.34394 AU direct -726 Apr 08 j 14:32 23°933'59 conjunction -734 Jun 21 j 01:49 20°**Ⅲ**27'38 0°15'15 max. Earth dist. -726 Jul 28 j 23:50 28°501'21 19.33258 AU minimum elong -734 Jun 21 j 01:48 20°**Ⅲ**27'38 0°15'16 behind sun begin -734 Jun 21 j 00:05 20°**Ⅲ**27'23 conjunction -726 Jul 30 j 03:52 28°905'44 0°37'30 behind sun end -734 Jun 21 j 03:32 20°**Ⅲ**27'53 minimum elong -726 Jul 30 j 03:52 28°905'44 0°37'30 retrograde -734 Oct 08 j 11:12 24°**Ⅱ**47'51 -726 Aug 30 j 10:14 $0^{\circ}\Omega$ opposition -734 Dec 21 j 06:15 22°**Ⅱ**45'25 0°18'47 retrograde -726 Nov 15 j 04:45 2°**Q**29'14 min. Earth dist. -734 Dec 22 j 04:30 22°**I**I43'00 17.62490 AU opposition -725 Jan 27 j 12:01 0°**Ω**27'01 0°42'52 direct -733 Mar 06 j 13:50 20°**Ⅱ**40'35 min. Earth dist. -725 Jan 28 j 12:44 0°**Ω**24'19 17.32332 AU max. Earth dist. -733 Jun 25 j 01:17 25°**Ⅱ**00'58 19.59681 AU -725 Feb 06 i 21:12 30°R55 direct -725 Apr 13 j 16:34 28°9520'38 -733 Jun 26 j 03:50 25°**I**I05'03 0°18'33 -725 Jun 15 j 18:06 $0^{\circ}\Omega$ conjunction -733 Jun 26 j 03:50 25°**II**05'03 0°18'34 max. Earth dist. -725 Aug 03 j 02:56 2°**Ω**48'21 19.31425 AU minimum elong -733 Oct 13 j 10:21 29°**Ⅲ**25'51 retrograde -733 Dec 26 j 01:14 27°II23'21 0°22'25 conjunction -725 Aug 04 j 07:59 2°**Ω**52'55 0°39'21 opposition -733 Dec 26 j 23:20 -725 Aug 04 j 07:59 min. Earth dist. 27°**П**20'56 17.57003 AU minimum elong 2°**Ω**52'55 0°39'22 -732 Mar 10 j 12:17 -725 Nov 20 j 06:00 25°**Ⅱ**18'10 7°**Ω**16'30 direct retrograde -732 Jun 29 j 03:05 29°**Ⅲ**39'45 19.54393 AU -724 Feb 01 j 12:40 max. Earth dist. 5°Ω14'20 0°44'48 opposition -724 Feb 02 j 13:03 5°**Ω**11'40 17.30735 AU min. Earth dist. -732 Jun 30 j 06:21 direct -724 Apr 17 j 20:01 29°II43'57 0°21'45 3°**Ω**07'51 conjunction -732 Jun 30 j 06:21 max. Earth dist. 29°**Ⅱ**43'57 -724 Aug 07 j 08:35 7°**Ω**36'12 19.30055 AU minimum elong 0°21'46 -732 Jul 04 j 14:37 0.00 -732 Oct 17 j 06:54 4°9505'18 -724 Aug 08 j 12:08 7°**Ω**40'32 0°40'56 retrograde conjunction opposition -732 Dec 29 j 21:17 2°502'45 0°25'55 minimum elong -724 Aug 08 j 12:07 7°**Ω**40'32 0°40'56 min. Earth dist. -732 Dec 30 j 20:56 2°500'10 17.51957 AU retrograde -724 Nov 24 j 06:48 12°**Ω**04'06 -723 Feb 05 j 13:57 10°**Ω**01'59 0°46'24 -731 Mar 05 j 08:09 30°RⅡ opposition direct -731 Mar 15 j 09:25 29°**I**57'16 min. Earth dist. -723 Feb 06 j 14:01 9°**Ω**59'21 17.29595 AU -731 Mar 25 j 12:55 0ಂತಾ direct -723 Apr 22 j 23:03 7°**Ω**55'27 max. Earth dist. -731 Jul 04 j 04:57 4°519'57 19.49592 AU max. Earth dist. -723 Aug 12 j 11:47 12°**Ω**23'56 19.29160 AU conjunction -731 Jul 05 j 09:01 4°524'17 0°24'49 conjunction -723 Aug 13 j 15:43 12°Ω28'20 0°42'14 -731 Jul 05 i 09:00 -723 Aug 13 j 15:43 12°Ω28'20 0°42'14 minimum elong 4°≌24'17 0°24'49 minimum elong -731 Oct 22 i 06:37 -723 Sep 25 i 02:30 15°Ω retrograde 8°9546'10 -730 Jan 03 i 17:53 -723 Nov 29 i 07:30 16°Ω51'50 opposition 6°543'36 0°29'16 retrograde -730 Jan 04 i 16:58 -722 Feb 06 i 16:47 15°RΩ min. Earth dist. 6°5541'05 17.47412 AU -730 Mar 20 i 09:48 -722 Feb 10 i 15:30 direct 4°937'53 opposition 14°Ω49'43 0°47'41 max. Earth dist. -730 Jul 09 j 08:27 9°501'45 19.45299 AU min. Earth dist. -722 Feb 11 j 15:13 14° Ω47'08 17.28956 AU direct -722 Apr 28 j 03:06 12°Ω43'08 conjunction -730 Jul 10 j 12:18 9°506'04 0°27'44 -722 Jul 12 j 05:52 15°**Ω** -730 Jul 10 j 12:18 minimum elong 9°**5**06'04 0°27'44 -730 Oct 27 j 04:05 retrograde 13°528'23 conjunction -722 Aug 18 j 19:14 17°Ω16'05 0°43'14 -729 Jan 08 j 15:16 opposition 11°525'52 0°32'26 minimum elong -722 Aug 18 j 19:14 17°**Ω**16′05 0°43'14 -729 Jan 09 j 15:36 min. Earth dist. 11°**©**23'12 17.43392 AU max. Earth dist. -722 Aug 17 j 17:01 17°**Ω**11'57 19.28776 AU -729 Mar 25 j 08:53 9°9519'57 retrograde -722 Dec 04 j 07:52 21°**Ω**39'23 direct -729 Jul 14 j 10:57 13°5544'44 19.41547 AU opposition -721 Feb 15 j 17:12 19°**Ω**37'19 0°48'38 max. Earth dist. min. Earth dist. -721 Feb 16 j 15:53 19°**Ω**34'51 17.28821 AU -729 Jul 15 j 15:50 direct -721 May 03 j 07:21 17°**Ω**30'44 conjunction 13°549'13 0°30'29 minimum elong -729 Jul 15 j 15:50 13°**©**49'13 0°30'30 -729 Nov 01 j 04:23 retrograde 18°911'57 conjunction -721 Aug 23 j 22:14 22°**Ω**03'34 0°43'55 opposition -728 Jan 13 j 13:19 16°909'30 0°35'24 minimum elong -721 Aug 23 j 22:14 22°**Ω**03'34 0°43'55 min. Earth dist. -728 Jan 14 j 13:08 16°506'53 17.39899 AU max. Earth dist. -721 Aug 22 j 20:24 21°**Ω**59'29 19.28916 AU direct -728 Mar 29 j 10:43 14°503'26 retrograde -721 Dec 09 j 07:41 26°**Ω**26'38

-720 Feb 20 j 19:19

opposition

24°**Ω**24'34

0°49'14

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -720 in astronomical counting style is the year 721 BCE in historical counting style. -720 Feb 21 j 17:33 24°Ω22'09 17.29249 AU min. Earth dist. opposition -712 Mar 30 j 12:27 2°**2**15'17 0°42'05 -720 May 07 i 11:32 22°Ω17'59 min. Earth dist. -712 Mar 30 i 21:21 2°**2**14'21 17.54033 AU direct

direct	-720 May 07 j 11:32	22° Ω 17'59		min. Earth dist.	-712 Mar 30 j 21:21	2° ₽ 14'21	17.54033 AU
max. Earth dist.	-720 Aug 27 j 00:44	26° Ω 46'48	19.29637 AU	direct	-712 Jun 15 j 15:49	0° £ 10'41	
conjunction	-720 Aug 28 j 00:35	26° Ω 50'34	0°44'18	conjunction	-712 Oct 04 j 19:52	4° £ 36'44	0°36'48
minimum elong	-720 Aug 28 j 00:35	26° £ 50′34	0°44'19	minimum elong	-712 Oct 04 j 19:52	4° £ 36'44	0°36'48
	-720 Oct 22 j 08:31	0°m		max. Earth dist.	-712 Oct 04 j 11:04		19.56600 AU
retrograde	-720 Dec 13 j 07:50	1° m)13'19		retrograde	-711 Jan 19 j 20:53	8° £ 55'09	19.50000110
retrograde	-719 Feb 05 j 14:21	30°R Ω		opposition	-711 Apr 04 j 13:50	6° £ 54'12	0°39'50
opposition	-719 Feb 24 j 21:32	29° Ω 11'16	0°40'30	min. Earth dist.	-711 Apr 04 j 20:03		17.59245 AU
min. Earth dist.	-719 Feb 25 j 17:47		17.30259 AU	direct	-711 Jun 20 j 18:12	4° - 49'58	17.37243 AO
direct	-719 May 12 j 16:48	29 δ 09 03 27° Ω 04'46	17.30239 AU	unect	-/11 Juli 20 J 16.12	4 = 4936	
unect		0°m)		aamiumatian	711 Oct 00 : 16:01	00 0 14144	0°34'41
F 4 F 4	-719 Aug 07 j 00:13		10 20050 ATT	conjunction	-711 Oct 09 j 16:01	9° £ 14'44	
max. Earth dist.	-719 Sep 01 j 03:58	1°110/33'24	19.30958 AU	minimum elong	-711 Oct 09 j 16:01	9° £ 14'44	0°34'40
				max. Earth dist.	-711 Oct 09 j 10:15		19.61949 AU
conjunction	-719 Sep 02 j 02:23	1° Mp 36'56	0°44'23	retrograde	-710 Jan 24 j 17:15	13° Ω 32'21	
minimum elong	-719 Sep 02 j 02:23	1°M 36'56	0°44'23	opposition	-710 Apr 09 j 14:46	11° ≏ 31'33	
retrograde	-719 Dec 18 j 06:33	5° m 59'19		min. Earth dist.	-710 Apr 09 j 19:57		17.64714 AU
opposition	-718 Mar 01 j 23:47	3° m 57'19	0°49'25	direct	-710 Jun 25 j 18:54	9° ≏ 27'41	
min. Earth dist.	-718 Mar 02 j 19:24		17.31907 AU				
direct	-718 May 17 j 20:38	1° m 50'55		conjunction	-710 Oct 14 j 11:08	13° ≙ 51′02	0°32'20
max. Earth dist.	-718 Sep 06 j 07:00	6° ™ 19'19	19.32933 AU	minimum elong	-710 Oct 14 j 11:09	13° ♀ 51'02	0°32'21
				max. Earth dist.	-710 Oct 14 j 06:10	13° ≏ 50'16	19.67540 AU
conjunction	-718 Sep 07 j 03:35	6° Mp 22'34	0°44'09	retrograde	-709 Jan 29 j 13:57	18° ഫ 07'52	
minimum elong	-718 Sep 07 j 03:35	6° Mp 22'34	0°44'09	opposition	-709 Apr 14 j 15:17	16° ≏ 07'10	0°34'37
retrograde	-718 Dec 23 j 06:24	10° m 44'31		min. Earth dist.	-709 Apr 14 j 18:01	16° ≙ 06'53	17.70409 AU
opposition	-717 Mar 07 j 02:03	8° m 42'36	0°48'59	direct	-709 Jun 30 j 20:15	14° ≏ 03'39	
min. Earth dist.	-717 Mar 07 j 19:04		17.34188 AU		, , , , , , , , , , , , , , , , , , , ,		
direct	-717 May 23 j 01:56	6° My 36'23	17.5 1100 110	conjunction	-709 Oct 19 j 05:25	18° ≏ 25'32	0°29'49
max. Earth dist.	-717 Sep 11 j 09:46		19.35534 AU	minimum elong	-709 Oct 19 j 05:25	18° ⊆ 25'32	0°29'49
max. Larm dist.	717 Sep 11 J 05.40	11 11/0430	17.55554710	max. Earth dist.	-709 Oct 19 j 03:34		19.73332 AU
conjunction	-717 Sep 12 j 04:09	11° m)07'24	0°43'38	retrograde	-708 Feb 03 j 09:01	22° £ 41'32	19.75552 AO
-		11° Mp 07'24	0°43'38		-	22 ⊆ 41 32 20° Ω 40'55	0°31'42
minimum elong	-717 Sep 12 j 04:09		0 43 38	opposition	-708 Apr 18 j 15:22		
retrograde	-717 Dec 28 j 04:27	15° m/28'52	0040114	min. Earth dist.	-708 Apr 18 j 16:34		17.76285 AU
opposition	-716 Mar 11 j 04:27	13° m/27'06	0°48'14	direct	-708 Jul 04 j 21:06	18° ≏ 37'44	
min. Earth dist.	-716 Mar 11 j 20:39		17.37104 AU				
direct	-716 May 27 j 05:09	11° m 21'08		conjunction	-708 Oct 22 j 22:38	22° £ 58'05	0°27'07
max. Earth dist.	-716 Sep 15 j 11:13	15° Mp 48'44	19.38768 AU	minimum elong	-708 Oct 22 j 22:38	22° ≏ 58'05	0°27'07
				max. Earth dist.	-708 Oct 22 j 21:48		19.79310 AU
conjunction	-716 Sep 16 j 03:58	15° Mp 51′22		retrograde	-707 Feb 07 j 03:18	27° £ 13′13	
minimum elong	-716 Sep 16 j 03:58	15°M 51'22	0°42'48	opposition	-707 Apr 23 j 14:40	25° ≏ 12'38	0°28'35
retrograde	-715 Jan 01 j 04:11	20°M 12'20		min. Earth dist.	-707 Apr 23 j 13:38	25° ≙ 12'45	17.82360 AU
opposition	-715 Mar 16 j 06:38	18° m 10'43	0°47'09	direct	-707 Jul 09 j 20:39	23° ≏ 09'47	
min. Earth dist.	-715 Mar 16 j 19:57	18° m 09'17	17.40617 AU				
direct	-715 Jun 01 j 09:46	16°M 05'03		conjunction	-707 Oct 27 j 14:59	27° ≏ 28'33	0°24'16
				minimum elong	-707 Oct 27 j 14:59	27° ≏ 28'33	0°24'16
conjunction	-715 Sep 21 j 03:05	20° Mp 34'25	0°41'42	max. Earth dist.	-707 Oct 27 j 17:20	27° ≏ 28'55	19.85476 AU
minimum elong	-715 Sep 21 j 03:05	20° m 34'25	0°41'43		-707 Dec 10 j 04:30	0° M .	
max. Earth dist.	-715 Sep 20 j 13:05	20° m 32'13	19.42556 AU	retrograde	-706 Feb 11 j 21:03	1°M42'47	
retrograde	-714 Jan 06 j 01:42	24° m 54'49		C	-706 Apr 21 j 09:52	30° Ŗ Ω	
opposition	-714 Mar 21 j 08:49	22° m 53'23	0°45'45	opposition	-706 Apr 28 j 13:19	29° Ω 42'17	0°25'20
min. Earth dist.	-714 Mar 21 j 21:23		17.44656 AU	min. Earth dist.	-706 Apr 28 j 10:18	29° Ω 42'35	17.88608 AU
direct	-714 Jun 06 j 11:33	20° mp 48'03	17.11030710	direct	-706 Jul 14 j 20:10	27° ⊆ 39'46	17.00000710
direct	71+3un 00 j 11.55	20 11/40 03		direct	-706 Sep 29 j 11:28	0°M	
agniunation	714 San 26 i 01:26	250 m 16/26	0.40.30		-700 Sep 29 j 11.28	O IIG	
conjunction	-714 Sep 26 j 01:26	25° Mp 16'26	0°40'20		70(N 01 : 0(-12	10 M 5/155	0021110
minimum elong	-714 Sep 26 j 01:26	25° Mp 16'26	0°40'20	conjunction	-706 Nov 01 j 06:12	1°M56'55	0°21'18
max. Earth dist.	-714 Sep 25 j 12:39		19.46841 AU	minimum elong	-706 Nov 01 j 06:12	1°M56'55	0°21'16
retrograde	-713 Jan 11 j 01:11	29° m/36'12		max. Earth dist.	-706 Nov 01 j 09:50		19.91825 AU
opposition	-713 Mar 26 j 10:35	27° m 34'57	0°44'04	retrograde	-705 Feb 16 j 13:20	6°M10'16	
min. Earth dist.	-713 Mar 26 j 20:23	-	17.49152 AU	opposition	-705 May 03 j 11:15	4°M09'48	0°21'58
direct	-713 Jun 11 j 14:55	25° m 29'59		min. Earth dist.	-705 May 03 j 06:08		17.95066 AU
				direct	-705 Jul 19 j 17:15	2°M07'38	
conjunction	-713 Sep 30 j 23:13	29° m 57'16	0°38'41				
minimum elong	-713 Sep 30 j 23:13	29° m 57'16	0°38'41	conjunction	-705 Nov 05 j 20:42	6°M23'11	0°18'13
max. Earth dist.	-713 Sep 30 j 13:24	29° m 55'43	19.51540 AU	minimum elong	-705 Nov 05 j 20:42	6°M23'11	0°18'13
	-713 Oct 01 j 16:38	0∘ ত		max. Earth dist.	-705 Nov 06 j 03:32	6°M24'13	19.98386 AU
retrograde	-712 Jan 15 j 22:25	4° £ 16′22		retrograde	-704 Feb 21 j 05:58	10°M35'39	

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -704 in astronomical counting style is the year 705 BCE in historical counting style. -698 Aug 19 j 21:30 -704 May 07 j 08:32 8°M35'17 0°18'29 opposition direct 2°**х** 31′09 min. Earth dist. -704 May 07 i 00:53 8°ML36'04 18.01722 AU -704 Jul 23 j 14:43 6°MJ33'30 -698 Dec 05 i 03:58 6°**∡**³36′08 0°-4'-43 direct conjunction -698 Dec 05 j 03:57 6°**х**³36′08 0°04'44 minimum elong -698 Dec 04 j 21:34 -704 Nov 09 j 10:06 10°M47'26 0°15'04 behind sun begin 6°**х** 35′13 conjunction -704 Nov 09 j 10:06 0°15'03 -698 Dec 05 j 10:21 6°**х** 37′04 minimum elong 10°M47'26 behind sun end -704 Nov 09 j 07:31 -698 Dec 05 j 23:03 6°**х** 38'59 20.46664 AU behind sun begin 10°M47'03 max. Earth dist. -704 Nov 09 j 12:41 -697 Mar 23 j 10:09 behind sun end 10°M47'49 retrograde 10°**х** 43′12 max. Earth dist. -704 Nov 09 j 18:24 10°ML48'41 20.05139 AU -697 Jun 08 j 17:22 8°**∡**¹43'51 opposition 0°-6'-58 retrograde -703 Feb 24 j 21:20 14°M59'04 min. Earth dist. -697 Jun 07 j 22:21 8° ₹45'46 18.49914 AU 6°**х¹**45′02 opposition -703 May 12 j 05:06 12°M58'48 0°14'56 direct -697 Aug 24 j 10:26 min. Earth dist. -703 May 11 j 19:39 12°M59'46 18.08570 AU -703 Jul 28 j 09:19 -697 Dec 09 j 12:50 10°**∡**¹48'40 0°-7'-56 direct 10° M $_{5}7'25$ conjunction -703 Nov 11 j 06:48 -697 Dec 09 j 12:50 15°M minimum elong 10°**∡**¹48'40 0°07'58 -697 Dec 09 j 06:58 behind sun begin 10°**∡**'47'49 conjunction -703 Nov 13 j 22:56 15°**™**09'47 0°11'51 behind sun end -697 Dec 09 j 18:42 10°**х** 49'31 minimum elong -703 Nov 13 j 22:56 15°M09'47 0°11'51 max. Earth dist. -697 Dec 10 j 09:21 10° ₹ 51'43 20.53087 AU behind sun begin -703 Nov 13 j 18:18 15°M09'06 retrograde -696 Mar 27 j 00:01 14°**₹**55'02 behind sun end -703 Nov 14 j 03:35 15°ML10′28 min. Earth dist. -696 Jun 11 j 11:49 12°**₹**'57'54 18.56184 AU max. Earth dist. -703 Nov 14 j 10:04 15°M11'28 20.12059 AU opposition -696 Jun 12 j 08:53 12°**∡** 55'47 0°-10'-31 retrograde -702 Mar 01 j 12:58 19°M20'34 direct -696 Aug 28 j 01:17 10°**∡**'57'18 opposition -702 May 17 j 00:42 17°M20'28 0°11'18 min. Earth dist. -702 May 16 j 12:43 17°ML21'41 18.15536 AU conjunction -696 Dec 12 j 21:04 14°**∡** 59'37 0°-11'-6 direct -702 Aug 02 j 04:33 15°M19'32 minimum elong -696 Dec 12 j 21:04 14°**∡** 59'37 0°11'08 behind sun begin -696 Dec 12 i 16:09 14°**∡** 58'54 -702 Nov 18 j 10:52 19°MJ30'21 0°08'35 behind sun end -696 Dec 13 j 02:00 15°**₹**'00'19 conjunction -702 Nov 18 j 10:52 19°MJ30'21 0°08'35 max. Earth dist. -696 Dec 13 i 18:24 15°**₹**02'46 20.59187 AU minimum elong behind sun begin -702 Nov 18 j 05:08 19°M29'30 retrograde -695 Mar 31 j 10:41 19°**₹**05'20 behind sun end -702 Nov 18 j 16:36 19°MJ31'12 opposition -695 Jun 16 j 23:48 17°**∡**106'08 0°-14'00 -702 Nov 18 j 23:22 -695 Jun 16 j 02:51 max. Earth dist. 19°M32'14 20.19069 AU min. Earth dist. 17°**₹**08'14 18.62125 AU -701 Mar 06 j 03:27 -695 Sep 01 j 12:42 15°**∡**'07'57 retrograde 23°M-40'21 direct -701 May 21 j 19:55 0°07'39 opposition 21°M40'23 -695 Dec 17 j 04:49 -701 May 21 j 06:36 19°**₹**08'59 0°-14'-12 min. Earth dist. 21°M41'45 18.22580 AU conjunction -695 Dec 17 j 04:49 -701 Aug 06 j 21:12 19°M39'54 minimum elong 19°**₹**08'59 0°14'13 direct -695 Dec 17 j 01:32 behind sun begin 19°**х** 08'30 -701 Nov 22 j 22:04 -695 Dec 17 j 08:06 23°M49'12 0°05'18 19°**х** 09′27 conjunction behind sun end -701 Nov 22 j 22:04 -695 Dec 18 j 03:12 max. Earth dist. 19°**✗**12'17 20.64957 AU minimum elong 23°M49'12 0°05'18 behind sun begin -701 Nov 22 j 15:45 23°M48'16 retrograde -694 Apr 04 j 23:08 23°**х¹**14′02 behind sun end -701 Nov 23 j 04:24 23°M50'08 opposition -694 Jun 21 j 13:40 21° 🖈 14'52 0°-17'-23 -701 Nov 23 j 13:04 -694 Jun 20 j 14:51 max. Earth dist. 23°M51'28 20.26118 AU min. Earth dist. 21°**✗**17'10 18.67721 AU retrograde -700 Mar 09 j 18:27 27°M58'26 direct -694 Sep 06 j 02:35 19°**∡**16'56 opposition -700 May 25 j 14:21 25°M58'39 0°03'59 min. Earth dist. -700 May 24 j 22:31 26°MJ00'15 18.29609 AU conjunction -694 Dec 21 j 11:56 23°**₹**16'45 0°-17'-12 direct -700 Aug 10 j 14:47 23°M58'36 minimum elong -694 Dec 21 j 11:56 23°**∡**16'45 0°17'14 max. Earth dist. -694 Dec 22 j 11:13 23°**✗**20′10 20.70384 AU -700 Nov 26 i 08:39 28°ML06'26 0°01'59 -693 Apr 09 i 08:55 27°**₹**21'12 conjunction retrograde -700 Nov 26 j 08:38 -693 Jun 25 i 04:28 25°**₹**24'17 18.73004 AU minimum elong 28°MJ06'26 0°01'59 min. Earth dist. -700 Nov 26 i 02:06 -693 Jun 26 i 03:07 25°**х** 22′01 behind sun begin 28°M05'28 opposition 0°-20'-39 -700 Nov 26 j 15:10 -693 Sep 10 j 12:28 behind sun end 28°M07'23 direct 23°×24'19 -700 Nov 27 i 00:51 max. Earth dist. 28°ML08'52 20.33112 AU -700 Dec 28 j 22:03 -693 Dec 25 i 18:29 0°×7 conjunction 27°×722'57 0°-20'-6 -699 Mar 14 i 07:47 -693 Dec 25 i 18:29 retrograde 2°**х** 14'55 minimum elong 27°**×**⁷22'57 0°20'07 opposition -699 May 30 j 08:02 0°**✓**15'17 0°00'18 max. Earth dist. -693 Dec 26 j 18:52 27° ₹26'31 20.75520 AU min. Earth dist. -699 May 29 j 15:30 -692 Feb 12 j 04:15 0°る 0° **₹**16'58 18.36566 AU -699 Jun 05 i 15:11 -692 Apr 12 j 19:51 1°る26'50 30°RM retrograde -699 Jun 29 j 08:46 -692 Jun 16 j 00:23 desc. node 29°M06'40 30°R*≯*7 -692 Jun 29 j 15:37 direct -699 Aug 15 j 05:22 28°M15'41 opposition 29°**х** 27'38 0°-23'-47 -699 Oct 19 j 19:26 0°**∡**¹ min. Earth dist. -692 Jun 28 j 15:02 29°**✗**30′06 18.77997 AU 27°**∡**³30′09 direct -692 Sep 14 j 01:04 -699 Nov 30 j 18:39 2°**₹**22'04 0°-1'-25 -692 Dec 03 j 11:47 0°정 conjunction -699 Nov 30 j 18:40 2°**҂**22'04 0°01'27 minimum elong -699 Nov 30 j 12:08 2°×21'07 -692 Dec 29 j 00:41 behind sun begin conjunction 1°る27'42 0°-22'-52 -699 Dec 01 j 01:12 -692 Dec 29 j 00:41 behind sun end 2°×23'01 minimum elong 1°**る**27'42 0°22'54 -699 Dec 01 j 12:46 -692 Dec 30 j 01:59 max. Earth dist. 2°**∡**24'47 20.39994 AU max. Earth dist. 1°る31'24 20.80364 AU -691 Apr 17 j 04:58 retrograde -698 Mar 18 j 22:08 6°**х** 29′49 retrograde 5°る31'03 min. Earth dist. -698 Jun 03 j 06:12 4°**尽**32'15 18.43353 AU min. Earth dist. -691 Jul 03 j 03:07 3°る34'18 18.82722 AU

opposition

-698 Jun 04 j 00:57

4°**尽**30'21 0°-3'-21

-691 Jul 04 j 03:23

opposition

3°る31'52 0°-26'-47

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direct	-691 Sep 18 j 09:33	1°る34'34	ii ustronomicui cou	direct	-683 Oct 20 j 19:07	3°≈38'28	
direct	ол вер то ј ол. 33	1 03131		ancer	005 0 01 20 j 15.07	3 74 30 20	
conjunction	-690 Jan 02 j 06:32	5° 天 31'08	0°-25'-31	conjunction	-682 Feb 03 j 00:13	7° ≈ 30'26	0°-41'-1
minimum elong	-690 Jan 02 j 06:32	5° ට 31'08		minimum elong	-682 Feb 03 j 00:13	7°≈30'26	
max. Earth dist.	-690 Jan 03 j 08:38		20.84956 AU	max. Earth dist.	-682 Feb 04 j 02:47		21.08578 AU
retrograde	-690 Apr 21 j 14:52	9° ප 34'01	20.04)30 AO	retrograde	-682 May 24 j 11:34	11°≈31'45	21.00370 AC
opposition	-690 Jul 08 j 14:29		0°-29'-37	opposition	-682 Aug 10 j 14:25	9°≈32'43	0°-45'-57
min. Earth dist.	-690 Jul 07 j 12:24		18.87178 AU	min. Earth dist.	-682 Aug 09 j 13:21		19.09034 AU
direct	-690 Sep 22 j 19:57	5° ප 37'46	16.6/1/6 AU	direct	-682 Oct 25 j 01:29	7°≈36'43	19.09034 AU
direct	-070 Sep 22 j 17.57	3 037 40		direct	-002 Oct 25 j 01.27	/ ~ 30 4 3	
conjunction	-689 Jan 06 j 11:54	9° ට 33'26	0° 28' 1	conjunction	-681 Feb 07 j 05:31	11° ≈ 28'30	0°-42'-8
minimum elong	-689 Jan 06 j 11:54	9° る 33'26		minimum elong	-681 Feb 07 j 05:31	11°≈28'30	
max. Earth dist.	-689 Jan 07 j 14:49		20.89261 AU	max. Earth dist.	-681 Feb 08 j 07:35		21.09246 AU
retrograde	-689 Apr 25 j 23:14	13° る 35'56	20.07201 AC	max. Lartii dist.	-681 Apr 23 j 09:09	15° ≈	21.07240 AC
min. Earth dist.	-689 Jul 11 j 23:32		18.91348 AU	retrograde	-681 May 28 j 17:56	15°≈29'51	
opposition	-689 Jul 13 j 01:13	11° ට 3721		retrograde	-681 Jul 03 j 20:20	15°R≈	
direct	-689 Sep 27 j 03:35	9° ප 39'54	0 32 10	opposition	-681 Aug 14 j 21:51	13° ≈ 30'42	0°-47'-4
direct	-007 Sep 27 J 05.55	7 03734		min. Earth dist.	-681 Aug 13 j 22:28		19.09421 AU
conjunction	-688 Jan 10 j 17:13	13° る 34'46	0° 30' 22	direct	-681 Oct 29 j 06:16	13 ≈ 33 03	19.09421 AU
minimum elong	-688 Jan 10 j 17:13	13° ප 34'46		direct	-680 Feb 03 j 18:24	11 ∞3441 15°≈	
max. Earth dist.	-688 Jan 11 j 20:39		20.93284 AU		-000 1 CO 05 j 10.24	15 ~	
retrograde	-688 Apr 29 j 08:50	17° る 36'56	20.73204 AU	conjunction	-680 Feb 11 j 11:06	15° ≈ 26'20	0° 43' 2
min. Earth dist.	-688 Jul 15 j 08:01		18.95207 AU	minimum elong	-680 Feb 11 j 11:06	15°≈26'20	
opposition	-688 Jul 16 j 11:08	15° る 37'48		max. Earth dist.	-680 Feb 12 j 12:12		21.09375 AU
direct	-688 Sep 30 j 11:57	13° ප 41'08	0 -34 -30	retrograde	-680 Jun 01 j 02:59	19° ≈ 27'44	21.09373 AO
direct	-000 Sep 30 j 11.37	13 041 00		min. Earth dist.	-680 Aug 17 j 05:18		19.09290 AU
conjunction	-687 Jan 13 j 22:20	17° ට 35'17	0° 32' 35	opposition	-680 Aug 18 j 04:40	17°≈28'29	
minimum elong	-687 Jan 13 j 22:20	17° る 35'17		direct	-680 Nov 01 j 12:05	17 ≈28 29 15°≈32'22	0 -47 -37
max. Earth dist.	-687 Jan 15 j 02:15		20.96958 AU	direct	-000 NOV 01 j 12.03	13 ~32 22	
retrograde	-687 May 03 j 16:33	17 3 3919 21° る 37'10	20.90938 AU	conjunction	-679 Feb 14 j 16:46	19° ≈ 24'00	0°-43'-44
opposition	-687 Jul 20 j 20:44	19° る 38'06	0° 37' 10	minimum elong	-679 Feb 14 j 16:46	19°≈24'00	
min. Earth dist.	-687 Jul 19 j 18:26		18.98700 AU	max. Earth dist.	-679 Feb 15 j 17:20		21.08992 AU
direct	-687 Oct 04 j 18:31	17° ප් 41'38	16.76700 AC	retrograde	-679 Jun 05 j 09:29	23°≈25'31	21.00//2 AO
direct	-007 Oct 04 j 10.51	17 041 36		opposition	-679 Aug 22 j 11:24	23 ≈ 25'31 21° ≈ 26'08	0°-48'-36
conjunction	-686 Jan 18 j 03:22	21° る 35'10	0° 34' 37	min. Earth dist.	-679 Aug 21 j 13:39		19.08676 AU
minimum elong	-686 Jan 18 j 03:22	21° る 35'10		direct	-679 Nov 05 j 16:22	19° ≈ 29'57	19.08070 AU
max. Earth dist.	-686 Jan 19 j 07:22		21.00255 AU	direct	-077 NOV 03 j 10.22	1) ~2) 31	
retrograde	-686 May 08 j 02:06	25° る 36'50	21.00233 AO	conjunction	-678 Feb 18 j 22:32	23° ≈ 21'38	0° 44' 13
min. Earth dist.	-686 Jul 24 j 02:27		19.01785 AU	minimum elong	-678 Feb 18 j 22:32	23°≈21'38	0°44'14
opposition	-686 Jul 25 j 05:44	23° る 37'48		max. Earth dist.	-678 Feb 19 j 22:08		21.08170 AU
direct	-686 Oct 09 j 01:49	21° ප් 41'30	0 -37 -20	retrograde	-678 Jun 09 j 18:09	27°≈23'19	21.00170 AC
direct	000 001 07 01.47	21 041 30		opposition	-678 Aug 26 j 17:49	25°≈23'49	0°-49'-1
conjunction	-685 Jan 22 j 08:26	25° ට 34'31	0°-36'-30	min. Earth dist.	-678 Aug 25 j 20:02		19.07647 AU
minimum elong	-685 Jan 22 j 08:25	25° ට 34'31		direct	-678 Nov 09 j 21:48	23°≈27'30	17.07047 110
max. Earth dist.	-685 Jan 23 j 12:36		21.03110 AU	ancer	0701101 07 j 21:10	25 /4/27 50	
retrograde	-685 May 12 j 09:23	29° ප 36'02	21.03110110	conjunction	-677 Feb 23 j 04:41	27° ≈ 19'22	0°-44'-29
opposition	-685 Jul 29 j 14:33	27° ප 37'03	0°-41'-18	minimum elong	-677 Feb 23 j 04:41	27°≈19'22	
min. Earth dist.	-685 Jul 28 j 12:29		19.04411 AU	max. Earth dist.	-677 Feb 24 j 03:45		21.06937 AU
direct	-685 Oct 13 j 07:24	25° ප් 40'54		Landi dibt.	-677 Apr 15 j 13:04	0° ∀	
				retrograde	-677 Jun 14 j 01:11	1° ∺ 21'17	
conjunction	-684 Jan 26 j 13:32	29° ට 33'28	0°-38'-11		-677 Aug 14 j 21:57	30°R≈	
minimum elong	-684 Jan 26 j 13:32			min. Earth dist.	-677 Aug 30 j 03:57		19.06228 AU
max. Earth dist.	-684 Jan 27 j 17:20		21.05492 AU	opposition	-677 Aug 31 j 00:10	29° ≈ 21'40	0°-49'-12
	-684 Feb 03 i 06:31	0° ≈		direct	-677 Nov 14 j 01:26	27° ≈ 25'15	
retrograde	-684 May 15 j 19:16	3° ≈ 34'53			-676 Feb 04 j 10:16	0°) €	
opposition	-684 Aug 01 j 22:51	1° ≈ 35'55	0°-43'-4		, ,		
min. Earth dist.	-684 Jul 31 j 20:19		19.06526 AU	conjunction	-676 Feb 27 j 11:10	1°) 17′23	0°-44'-33
	-684 Sep 17 j 22:08	30°Ŗる		minimum elong	-676 Feb 27 j 11:10	1°) € 17'23	
direct	-684 Oct 16 j 14:09	29° る 39'51		max. Earth dist.	-676 Feb 28 j 09:03		21.05346 AU
	-684 Nov 13 j 14:27	0° ≈		retrograde	-676 Jun 17 j 10:24	5°) 19'36	
	<i>j</i> ,			min. Earth dist.	-676 Sep 02 j 10:18		19.04450 AU
conjunction	-683 Jan 29 j 18:51	3° ≈ 32'06	0°-39'-42	opposition	-676 Sep 03 j 06:20	3°) €19'53	
minimum elong	-683 Jan 29 j 18:51	3° ≈ 32'06		direct	-676 Nov 17 j 06:39	1°) €23′20	
max. Earth dist.	-683 Jan 30 j 22:16		21.07317 AU		,		
retrograde	-683 May 20 j 01:56	7° ≈ 33'27		conjunction	-675 Mar 02 j 18:05	5°) 15′50	0°-44'-24
min. Earth dist.	-683 Aug 05 j 05:53		19.08070 AU	minimum elong	-675 Mar 02 j 18:05	5°) €15'50	
opposition	-683 Aug 06 j 06:47		0°-44'-37	max. Earth dist.	-675 Mar 03 j 15:15		21.03380 AU
					ž.		

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -675 in astronomical counting style is the year 676 BCE in historical counting style. -675 Jun 21 i 17:49 9°**)** 18′24 11°Y42'58 retrograde retrograde -667 Jul 25 i 05:15 opposition -675 Sep 07 j 12:28 7°**¥**18'36 0°-48'-53 opposition -667 Oct 09 j 19:26 9°**Y**'42'18 0°-38'-15 min. Earth dist. -675 Sep 06 j 18:10 7°**¥**20'28 19.02304 AU min. Earth dist. -667 Oct 09 j 14:00 9°**Y**42'52 18.70470 AU -675 Nov 21 j 10:00 5°\ 21'57 -667 Dec 23 j 08:28 7°**Y**43′50 direct direct -674 Mar 07 j 01:24 9°**)** 14'55 0°-44'-2 -666 Apr 09 j 11:32 11°**Y**43'28 0°-33'-33 conjunction conjunction -674 Mar 07 j 01:24 9°\ 14'55 0°44'03 -666 Apr 09 j 11:32 11°**Y**43'28 0°33'34 minimum elong minimum elong -674 Mar 07 j 21:09 9°**升**17'43 21.01073 AU -666 Apr 09 j 16:21 11°**Υ**44'10 20.67610 AU max. Earth dist. max. Earth dist. -666 Jul 29 j 17:50 -674 Jun 26 j 03:56 15°Υ51'11 retrograde 13°**光**17'54 retrograde -666 Oct 14 j 03:25 opposition -674 Sep 11 j 18:41 11°**H** 18'02 0°-48'-22 opposition 13°**Ƴ**50'17 0°-35'-55 -674 Sep 11 j 00:48 min. Earth dist. 11°**米**19'51 18.99813 AU min. Earth dist. -666 Oct 13 j 23:24 13°**Y**50'43 18.64665 AU -674 Nov 25 j 15:15 -666 Dec 27 j 16:47 11°Y51'27 direct 9°**米**21′15 direct conjunction -673 Mar 11 j 09:13 13°**升** 14'47 0°-43'-28 conjunction -665 Apr 14 j 00:55 15°Υ52'14 0°-31'-20 minimum elong -673 Mar 11 j 09:13 13°**)** 14'47 0°43'28 minimum elong -665 Apr 14 j 00:56 15°Υ52'14 0°31'22 max. Earth dist. -673 Mar 12 j 04:09 13°**¥**17′28 20.98394 AU max. Earth dist. -665 Apr 14 j 04:33 15°**Y**52'46 20.61667 AU -673 Jun 30 j 12:27 retrograde 17°**¥**18'14 retrograde -665 Aug 03 j 05:23 20°**Y**00′39 min. Earth dist. -673 Sep 15 j 09:11 15°**升**19'56 18.96938 AU opposition -665 Oct 18 j 11:48 17°**Y**59'35 0°-33'-23 opposition -673 Sep 16 j 01:05 15°**₩**18'18 0°-47'-37 min. Earth dist. -665 Oct 18 j 09:44 17°**Y**59'48 18.58601 AU direct -673 Nov 29 j 19:07 13°**)**€21'24 direct -664 Jan 01 j 00:35 16°**Y**′00′22 conjunction -672 Mar 14 j 17:48 17°**)** 15'34 0°-42'-40 conjunction -664 Apr 17 j 15:03 20°**Y**′02'23 0°-28'-58 minimum elong -672 Mar 14 j 17:48 17°\ 15'34 0°42'42 minimum elong -664 Apr 17 j 15:04 20°**Y**′02'23 0°28'57 max. Earth dist. -672 Mar 15 i 10:50 17°**¥**18′00 20.95336 AU max. Earth dist. -664 Apr 17 j 15:51 20°**Υ**'02'30 20.55516 AU -664 Aug 06 j 19:03 retrograde -672 Jul 03 i 23:12 21°¥19'33 retrograde 24°Y11'33 opposition -672 Sep 19 j 07:24 19°**¥**19'33 0°-46'-38 opposition -664 Oct 21 j 20:27 22°**Y**10'18 0°-30'-40 min. Earth dist. -672 Sep 18 j 16:29 19°**¥**21′05 18.93668 AU min. Earth dist. -664 Oct 21 j 19:53 22°Υ10'22 18.52366 AU -672 Dec 03 j 00:35 17° ¥ 22'29 direct -663 Jan 04 j 10:14 20°Y10'42 direct -671 Mar 19 j 03:05 24° \bar{\gamma} 14'02 0° -26' -25 21°**)** 17'25 0°-41'-40 -663 Apr 22 j 06:05 conjunction conjunction -671 Mar 19 j 03:05 21°**)** 17'25 0°41'41 -663 Apr 22 j 06:05 24°**Υ**14'02 0°26'26 minimum elong minimum elong -671 Mar 19 j 18:51 21°\mathbf{1}9'40 20.91842 AU max. Earth dist. -663 Apr 22 j 05:53 24°Υ14'00 20.49204 AU max. Earth dist. -671 Jul 08 j 08:58 -663 Aug 11 j 07:36 28°Y23'58 retrograde 25°**∺**21'56 retrograde -671 Sep 23 j 14:09 23°**H**21'52 0°-45'-25 -663 Oct 26 j 05:45 26°Y22'35 0°-27'-46 opposition opposition -671 Sep 23 j 01:29 -663 Oct 26 j 06:51 26°**Y**22'28 18.45997 AU 23°**₭**23'10 18.89946 AU min. Earth dist. min. Earth dist. -671 Dec 07 j 05:34 24°**Y**22'37 21°**)** 24'37 -662 Jan 08 j 18:51 direct direct conjunction -670 Mar 23 j 12:52 25° **★**20'21 0°-40'-28 conjunction -662 Apr 26 j 21:36 28°Y27'18 0°-23'-43 minimum elong -670 Mar 23 j 12:52 25°**¥**20'21 0°40'29 minimum elong -662 Apr 26 j 21:36 28°**Y**27'18 0°23'43 max. Earth dist. -670 Mar 24 j 02:15 25°**升**22'16 20.87900 AU max. Earth dist. -662 Apr 26 j 18:37 28°Y26'52 20.42803 AU retrograde -670 Jul 12 j 20:16 29°**)** 25'29 -662 May 23 j 23:17 0° 8 opposition -670 Sep 27 j 21:07 27°****25'18 0°-43'-58 retrograde -662 Aug 15 j 22:32 2°838'05 min. Earth dist. -670 Sep 27 j 09:42 27°**升**26′29 18.85761 AU opposition -662 Oct 30 j 15:35 0°836'34 0°-24'-42 direct -670 Dec 11 j 11:38 25°**)**€27'49 min. Earth dist. -662 Oct 30 j 18:12 0°836'17 18.39564 AU -662 Nov 14 j 06:35 30°RY -669 Mar 27 j 23:34 29°**)** 24'26 0°-39'-2 28° **Y**36'14 conjunction direct -661 Jan 13 i 05:46 -669 Mar 27 j 23:34 minimum elong 29°**)** 24'26 0°39'02 -661 Mar 12 j 09:12 0°8 -669 Mar 28 j 11:24 29°\(\frac{1}{2}26'07\) 20.83470 AU max. Earth dist. -669 Apr 07 j 08:24 $0^{\circ}\Upsilon$ -661 May 01 j 14:22 2°842'22 0°-20'-52 conjunction -669 Jul 17 i 06:41 retrograde 3°Y30'10 minimum elong -661 May 01 i 14:23 2°842'22 0°20'53 -669 Oct 02 i 04:18 opposition 1°Y29'51 0°-42'-17 max. Earth dist. -661 May 01 i 10:31 2°841'48 20.36339 AU min. Earth dist. -669 Oct 01 j 19:15 1°Υ30'47 18.81090 AU retrograde -661 Aug 20 j 12:27 6°853'59 30°**₹** -669 Nov 12 j 09:40 opposition -661 Nov 04 j 01:55 4°852'23 0°-21'-29 -669 Dec 15 j 18:01 29°**)** 32'04 -661 Nov 04 j 06:08 direct min. Earth dist. 4°**8**51'56 18.33075 AU -668 Jan 17 j 15:53 $0^{\circ}\Upsilon$ -660 Jan 17 j 16:11 direct 2°**8**51'43 conjunction -668 Mar 31 j 10:56 3°Y29'38 0°-37'-24 conjunction -660 May 05 j 07:55 6°859'21 0°-17'-54 minimum elong -668 Mar 31 j 10:56 3°**Y**29'38 0°37'25 minimum elong -660 May 05 j 07:55 6°**と**59'21 0°17'55 -668 Mar 31 j 19:58 3°Υ30'55 20.78586 AU max. Earth dist. -660 May 05 j 01:00 6°858'20 20.29845 AU max. Earth dist. -668 Jul 20 j 18:34 7°Y36'00 retrograde -660 Aug 24 j 04:15 11°**8**11'51 retrograde -668 Oct 05 j 11:45 5°**Υ**35'30 0°-40'-22 -660 Nov 07 j 12:59 9°**8**10'11 0°-18'-7 opposition opposition -668 Oct 05 j 04:08 min. Earth dist. 5°**Y**36'17 18.75980 AU min. Earth dist. -660 Nov 07 j 18:59 9°**8**09'32 18.26570 AU direct -668 Dec 19 j 01:09 3°**Y**37′23 direct -659 Jan 21 j 04:10 7°**8**09'11 conjunction -667 Apr 04 j 22:55 7°**Υ**35'58 0°-35'-34 conjunction -659 May 10 j 02:24 11°**8**18'23 0°-14'-48 minimum elong -667 Apr 04 j 22:55 7°**Ƴ**35'58 0°35'35 minimum elong -659 May 10 j 02:24 11°**8**18'23 0°14'48

max. Earth dist.

-667 Apr 05 j 06:29

7°**Υ**37'03 20.73267 AU

behind sun begin

-659 May 10 j 00:01

11°**8**18'02

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -659 in astronomical counting style is the year 660 BCE in historical counting style. -659 May 10 j 04:47 11°**8**18'43 behind sun end behind sun end -653 Jun 07 i 18:51 7°**II**56'17 max. Earth dist. -659 May 09 i 18:40 11°**8**17'15 20.23317 AU max. Earth dist. -653 Jun 06 i 15:48 7°**I**I52'14 19.83401 AU -659 Jul 24 j 14:46 15°8 -653 Sep 25 j 10:25 12°**Ⅱ**13'36 retrograde -659 Aug 28 j 20:02 15°**8**31'46 -653 Dec 08 j 14:41 10°**Ⅱ**11'24 0°08'04 retrograde opposition -659 Oct 03 j 09:20 15°R₩ min. Earth dist. -653 Dec 09 j 08:19 10°**Д**09'29 17.80139 AU -659 Nov 12 j 00:43 13°**8**30'03 0°-14'-37 -652 Feb 21 j 17:08 8°**Ⅲ**07'42 opposition direct -659 Nov 12 j 08:15 13°**8**29'15 18.20020 AU min. Earth dist. -658 Jan 25 j 16:56 11°**8**28'45 -652 Jun 11 j 12:37 12°**Ⅲ**27'53 0°09'02 direct conjunction -652 Jun 11 j 12:37 -658 May 03 j 17:59 12°**Ⅲ**27'53 0°09'03 15°8 minimum elong -652 Jun 11 j 06:52 behind sun begin 12°**Ⅲ**27′02 -652 Jun 11 j 18:21 conjunction -658 May 14 j 21:46 15°**8**39'31 0°-11'-35 behind sun end 12°**Ⅲ**28'44 -658 May 14 j 21:46 15°**8**39'31 -652 Jun 10 j 13:34 12°**П**24'24 19.76935 AU minimum elong 0°11'37 max. Earth dist. -658 May 14 j 17:02 15°838'50 -652 Sep 29 j 06:31 behind sun begin retrograde 16°**Ⅱ**46'52 15°840'12 behind sun end -658 May 15 j 02:30 opposition -652 Dec 12 j 07:41 14°**Ⅱ**44'32 0°11'54 max. Earth dist. -658 May 14 j 10:46 15°**8**37'54 20.16753 AU min. Earth dist. -652 Dec 13 j 03:25 14°**I**I42'23 17.73795 AU retrograde -658 Sep 02 j 12:33 19°853'49 direct -651 Feb 25 j 11:23 12°**Ⅱ**40′24 opposition -658 Nov 16 j 13:09 17°**8**52'03 0°-11'00 min. Earth dist. -658 Nov 16 j 22:50 17°**8**51'00 18.13438 AU conjunction -651 Jun 16 j 13:23 17°**Ⅲ**02'03 0°12'27 direct -657 Jan 30 j 06:19 15°850'23 minimum elong -651 Jun 16 j 13:22 17°**Ⅲ**02'03 0°12'27 behind sun begin -651 Jun 16 j 09:05 17°**Ⅱ**01'25 conjunction -657 May 19 j 18:19 20°802'46 0°-8'-18 behind sun end -651 Jun 16 j 17:40 17°**Ⅲ**02'42 minimum elong -657 May 19 j 18:19 20°**8**02'46 0°08'17 max. Earth dist. -651 Jun 15 j 13:46 16°**Ц**58'28 19.70716 AU behind sun begin -657 May 19 j 12:22 20°801'55 retrograde -651 Oct 04 i 03:57 21°**II**21'42 behind sun end -657 May 20 j 00:16 20°803'38 opposition -651 Dec 17 i 01:17 19°**Ⅱ**19'15 0°15'41 max. Earth dist. -657 May 19 i 06:15 20°**8**01'00 20.10132 AU min. Earth dist. -651 Dec 17 j 21:10 19°**I**17′05 17.67723 AU retrograde -657 Sep 07 i 06:16 24°817'55 direct -650 Mar 02 j 07:52 17°**Ⅲ**14'44 opposition -657 Nov 21 j 02:23 22°**8**16'06 0°-7'-17 min. Earth dist. -657 Nov 21 j 13:34 22°814'54 18.06780 AU -650 Jun 21 j 14:46 21°**Ⅲ**37'47 0°15'49 conjunction -656 Feb 03 j 21:31 20°814'05 -650 Jun 21 j 14:46 21°**Ⅲ**37'47 0°15'49 direct minimum elong -650 Jun 20 j 13:28 21°**Ц**33'56 19.64800 AU max. Earth dist. -650 Oct 09 j 00:25 -656 May 23 j 15:35 24°**8**28'05 0°-4'-56 25°II58'03 conjunction retrograde 0°04'56 -656 May 23 j 15:35 24°**8**28'05 -650 Dec 21 j 19:39 23°**II**55'31 0°19'24 minimum elong opposition -656 May 23 j 08:59 24°827'07 -650 Dec 22 j 17:24 23°**Ц**53'09 17.62005 AU behind sun begin min. Earth dist. -656 May 23 j 22:12 -649 Mar 07 j 03:17 24°**8**29'02 21°**I**I50'37 behind sun end direct -656 May 23 j 00:03 24°**8**25'46 20.03443 AU max. Earth dist. 26°**I**15'03 0°19'05 -656 Sep 10 j 23:47 -649 Jun 26 j 16:46 28°**8**44'04 retrograde conjunction -649 Jun 26 j 16:46 -656 Nov 24 j 16:23 26°**8**42'10 0°-3'-29 26°II15'03 0°19'06 opposition minimum elong min. Earth dist. -656 Nov 25 j 05:54 26°840'43 18.00077 AU max. Earth dist. -649 Jun 25 j 14:51 26°**Ⅱ**11'05 19.59279 AU -649 Sep 07 j 12:35 direct -655 Feb 07 j 12:43 24°**8**39'45 0ಂತಾ -649 Oct 13 j 22:59 retrograde 0°935'53 -649 Nov 19 j 19:48 conjunction -655 May 28 j 13:50 28°**8**55'20 0°-1'-28 30°RⅡ minimum elong -655 May 28 j 13:50 28°855'20 0°01'28 opposition -649 Dec 26 j 14:46 28° II 33'18 0°23'00 behind sun begin -655 May 28 j 07:02 28°**8**54'21 min. Earth dist. -649 Dec 27 j 12:16 28°**Ц**30'57 17.56696 AU behind sun end -655 May 28 j 20:37 28°**8**56'19 direct -648 Mar 11 j 01:56 26°**Ⅲ**28′05 max. Earth dist. -655 May 27 j 21:16 28°**8**52'52 19.96723 AU -648 Jun 16 j 03:26 0ಂತಾ -655 Jun 15 i 17:24 $\Pi^{\circ}0$ -655 Sep 15 j 19:04 3°**Ⅱ**12'07 -648 Jun 30 j 19:10 0°953'49 0°22'15 retrograde conjunction -655 Oct 28 i 09:44 2°II26'24 -648 Jun 30 j 19:10 asc. node minimum elong 0°953'49 0°22'15 -655 Nov 29 i 07:07 1°**I**10'08 0°00'20 -648 Jun 29 i 16:25 opposition max. Earth dist. 0°549'42 19.54183 AU min. Earth dist. -655 Nov 29 i 21:43 1°**I**108'34 17.93355 AU retrograde -648 Oct 17 i 20:08 5°915'11 -648 Dec 30 j 10:47 -655 Dec 28 j 03:41 30°R8 opposition 3°912'36 0°26'28 direct -654 Feb 12 j 05:45 29°807'19 min. Earth dist. -648 Dec 31 j 09:49 3°510'05 17.51849 AU -654 Mar 29 j 11:17 $\Pi^{\circ}0$ direct -647 Mar 15 j 22:54 1°907'07 -647 Jul 05 j 22:00 conjunction -654 Jun 02 j 12:34 3°∏24'27 0°02'06 conjunction 5°**ॐ**34'06 0°25'18 -654 Jun 02 j 12:34 3°**Ⅱ**24'27 minimum elong 0°02'07 minimum elong -647 Jul 05 j 22:00 5°934'06 0°25'18 -654 Jun 02 j 05:46 3°**Ⅱ**23'27 behind sun begin max. Earth dist. -647 Jul 04 j 18:34 5°529'52 19.49584 AU 3°**Ⅲ**25′26 behind sun end -654 Jun 02 j 19:22 retrograde -647 Oct 22 j 19:40 9°955'59 -654 Jun 01 j 16:55 3°**Д**21'30 19.90018 AU -646 Jan 04 j 07:20 max. Earth dist. opposition 7°953'25 0°29'47 7°**Ⅱ**42'01 -654 Sep 20 j 13:57 -646 Jan 05 j 05:53 retrograde min. Earth dist. 7°950'57 17.47495 AU -654 Dec 03 j 22:39 5°**II**39'54 0°04'12 -646 Mar 20 j 23:11 opposition direct 5°9547'43 -654 Dec 04 j 15:33 -646 Jul 09 j 21:48 min. Earth dist. 5°**I**38'05 17.86691 AU max. Earth dist. 10°5511'37 19.45464 AU direct -653 Feb 16 j 22:34 3°**Ⅱ**36'38 conjunction -646 Jul 11 j 01:20 10°**©**15'53 0°28'11 conjunction -653 Jun 07 j 12:20 7°**Ⅱ**55'19 0°05'35 minimum elong -646 Jul 11 j 01:20 10°9515'53 0°28'12 minimum elong -653 Jun 07 j 12:20 7°**I**55′19 0°05'35 retrograde -646 Oct 27 j 18:00 14°538'13 behind sun begin -653 Jun 07 j 05:49 7°**I**I54'22 -645 Jan 09 j 04:53 12°935'44 0°32'55 opposition

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -645 in astronomical counting style is the year 646 BCE in historical counting style. 12°533'06 17.43617 AU min. Earth dist. -645 Jan 10 j 04:52 minimum elong -638 Aug 19 j 08:46 18°**Ω**26'25 0°43'21 -645 Mar 25 j 21:43 10°929'51 retrograde -638 Dec 04 j 22:23 22°**Ω**49'45 direct max. Earth dist. -645 Jul 15 j 00:26 14°554'39 19.41819 AU -637 Feb 16 j 06:53 20°Ω47'40 0°48'44 opposition -637 Feb 17 j 05:38 min. Earth dist. 20° **Ω**45'11 17.28765 AU -645 Jul 16 j 05:00 14°959'06 0°30'55 -637 May 03 j 21:01 conjunction direct 18°**Ω**41′05 -645 Jul 16 j 05:00 minimum elong 14°959'06 0°30'55 max. Earth dist. -637 Aug 23 j 09:54 23°**Ω**09'52 19.28868 AU -645 Nov 01 j 18:28 retrograde 19°921'51 -644 Jan 14 j 02:58 opposition 17°519'26 0°35'52 conjunction -637 Aug 24 j 11:37 23°**Ω**13'56 0°43'59 -644 Jan 15 j 02:32 17°516'51 17.40199 AU minimum elong min. Earth dist. -637 Aug 24 j 11:37 23°**Ω**13′56 0°44'00 -637 Dec 09 j 21:16 direct -644 Mar 30 j 00:00 15°9513'25 retrograde 27°**Ω**37'02 max. Earth dist. -644 Jul 19 j 05:01 19°539'15 19.38610 AU opposition -636 Feb 21 j 08:56 25°**Ω**34'58 0°49'17 -636 Feb 22 j 06:59 min. Earth dist. 25°**Ω**32'34 17.29225 AU -644 Jul 20 j 09:05 conjunction 19°543'38 0°33'26 direct -636 May 08 j 00:13 23°**Ω**28′24 minimum elong -644 Jul 20 j 09:05 19°5543'38 0°33'27 retrograde -644 Nov 05 j 17:34 24°9506'42 conjunction -636 Aug 28 j 14:04 28° Ω01'00 0°44'19 opposition -643 Jan 18 j 02:04 22°**©**04'23 0°38'34 minimum elong -636 Aug 28 j 14:04 28° Ω01'00 0°44'19 min. Earth dist. -643 Jan 19 j 02:46 22°**©**01'41 17.37213 AU max. Earth dist. -636 Aug 27 j 14:33 27°**Ω**57'17 19.29646 AU direct -643 Apr 04 j 00:20 19°958'15 -636 Sep 29 j 23:52 0° m max. Earth dist. -643 Jul 24 j 07:49 24°524'43 19.35838 AU retrograde -636 Dec 13 j 22:13 2° m 23'47 opposition -635 Feb 25 j 11:05 0° m) 21'46 0°49'29 conjunction -643 Jul 25 j 13:01 24°529'17 0°35'45 min. Earth dist. -635 Feb 26 j 07:12 0° mp 19'35 17.30318 AU minimum elong -643 Jul 25 i 13:01 24°9529'17 0°35'44 -635 Mar 05 j 21:06 30°RΩ retrograde -643 Nov 10 j 18:31 28°952'38 direct -635 May 13 j 06:06 28° Ω 15'17 opposition -642 Jan 23 i 01:37 26°950'22 0°41'01 -635 Jul 17 i 04:07 0° m min. Earth dist. -642 Jan 24 i 01:52 26°547'43 17.34656 AU -642 Apr 09 j 04:00 24°9544'07 -635 Sep 02 j 15:47 2°m47'29 0°44'21 direct conjunction minimum elong -635 Sep 02 j 15:47 2°m47'29 0°44'21 -642 Jul 30 j 17:23 29°515'51 0°37'49 max. Earth dist. -635 Sep 01 j 17:34 2° m 43'59 19.31071 AU conjunction -642 Jul 30 j 17:23 29°515'51 0°37'49 -635 Dec 18 j 20:10 7° m 09'54 minimum elong retrograde -642 Jul 29 j 13:10 opposition -634 Mar 02 j 13:24 5° m 07'57 0°49'21 max. Earth dist. 29°5511'26 19.33482 AU -642 Aug 11 j 11:37 -634 Mar 03 j 08:42 5° m 05'52 17.32077 AU 0 $^{\circ}\Omega$ min. Earth dist. -642 Nov 15 j 18:28 3°**Ω**39'21 -634 May 18 j 09:22 3° Mp 01'36 retrograde direct -641 Jan 28 j 01:47 1°**Ω**37'10 0°43'11 opposition -641 Jan 29 j 02:43 7° m 33'18 0°44'04 min. Earth dist. 1°**Ω**34'27 17.32514 AU -634 Sep 07 j 17:03 conjunction -634 Sep 07 j 17:03 -641 Mar 11 j 11:25 7° mp 33'18 0°44'05 30°R∽ minimum elong -634 Sep 06 j 20:51 -641 Apr 14 j 06:13 29°930'49 7° Mp 30'07 19.33164 AU direct max. Earth dist. -641 May 17 j 13:26 -634 Dec 23 j 20:29 11°M 55'17 0 \circ Ω retrograde opposition -633 Mar 07 j 15:35 9° m 53'27 0°48'52 conjunction -641 Aug 04 j 21:34 4°Ω03'05 0°39'37 min. Earth dist. -633 Mar 08 j 08:25 9° m 51'38 17.34476 AU minimum elong -641 Aug 04 j 21:34 4°Ω03'05 0°39'37 direct -633 May 23 j 15:27 7° m/47'19 max. Earth dist. -641 Aug 03 j 16:19 3°**Ω**58'30 19.31563 AU retrograde -641 Nov 20 j 19:25 8°**Ω**26'42 -633 Sep 12 j 17:42 12° m 18'22 0°43'30 conjunction -640 Feb 02 j 02:30 6°**Q**24'32 0°45'04 -633 Sep 12 j 17:42 12° m 18'22 0°43'30 opposition minimum elong min. Earth dist. -640 Feb 03 j 02:57 6°**Ω**21'52 17.30827 AU max. Earth dist. -633 Sep 11 j 23:31 12° m 15'30 19.35881 AU -640 Apr 18 j 09:49 $4^{\circ}\Omega 18'05$ -633 Dec 28 j 18:10 16° Mp 39'53 direct retrograde -640 Aug 07 j 21:56 8°**Ω**46'24 19.30104 AU 14° m 38'12 0°48'04 max. Earth dist. opposition -632 Mar 11 j 18:03 min. Earth dist. -632 Mar 12 j 10:05 14° m 36'29 17.37495 AU -632 May 27 j 18:04 -640 Aug 09 i 01:35 8°Ω50'45 0°41'09 conjunction direct 12° m 32'20 minimum elong -640 Aug 09 i 01:35 8°**Ω**50'45 0°41'09 -640 Nov 24 i 20:31 retrograde 13°Ω14'21 -632 Sep 16 j 17:29 17° m 02'36 0°42'38 conjunction -632 Sep 16 i 17:29 opposition -639 Feb 06 i 03:43 11°Ω12'14 0°46'37 minimum elong 17° m 02'36 0°42'39 -632 Sep 16 j 01:04 min. Earth dist. -639 Feb 07 j 03:59 11°**Ω**09'36 17.29605 AU max. Earth dist. 17° m 00'01 19.39193 AU direct -639 Apr 23 j 13:18 9°Ω05'43 retrograde -631 Jan 01 j 18:21 21° m 23'36 max. Earth dist. -639 Aug 13 j 01:12 -631 Mar 16 j 20:19 13°**Ω**34'11 19.29142 AU opposition 19° m/22'04 0°46'56 min. Earth dist. -631 Mar 17 j 09:38 19° m 20'39 17.41059 AU -631 Jun 01 j 23:00 conjunction -639 Aug 14 j 05:16 13°**Ω**38'36 0°42'24 direct 17° Mp 16'30 minimum elong -639 Aug 14 j 05:16 13°**Ω**38'36 0°42'24 -639 Sep 05 j 00:25 15°Ω -631 Sep 21 j 16:49 21° m/45'53 0°41'29 conjunction -639 Nov 29 j 20:48 18°**Ω**02'08 -631 Sep 21 j 16:49 retrograde minimum elong 21° Mp 45'53 0°41'29 -638 Feb 11 j 05:05 16°Ω00'01 0°47'51 -631 Sep 21 j 02:50 21° Mp 43'41 19.43007 AU opposition max. Earth dist. -638 Feb 12 j 04:50 15°**Ω**57'26 17.28915 AU -630 Jan 06 j 15:50 min. Earth dist. retrograde 26° Mp 06'17 -638 Mar 07 j 04:00 15°RΩ opposition -630 Mar 21 j 22:28 24° Mp 04'55 0°45'29 direct -638 Apr 28 j 16:08 13°**Ω**53'27 min. Earth dist. -630 Mar 22 j 11:10 24° Mp 03'34 17.45104 AU -638 Jun 18 j 17:11 15°**Ω** direct -630 Jun 07 j 00:55 21° **m** 59'40max. Earth dist. -638 Aug 18 j 06:37 18°**Ω**22'17 19.28722 AU -630 Sep 26 j 15:21 26° Mp 28'02 $0^{\circ}40'04$ conjunction conjunction -638 Aug 19 j 08:46 18°**Ω**26'25 0°43'21 -630 Sep 26 j 15:21 26° Mp 28'02 $0^{\circ}40'04$ minimum elong

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -630 in astronomical counting style is the year 631 BCE in historical counting style. -630 Sep 26 i 02:35 26° m 26'02 19.47275 AU max. Earth dist. conjunction -622 Nov 01 i 20:03 3°ML07'04 0°20'44 minimum elong -630 Nov 30 i 18:42 0∘**⊽** -622 Nov 01 j 20:03 3°M207'04 0°20'43 3°M07'38 19.91836 AU -629 Jan 11 j 15:27 0°**£**47'48 max. Earth dist. -622 Nov 01 j 23:42 retrograde -629 Feb 24 j 02:02 -621 Feb 17 j 03:58 7°M20'23 30°R, M) retrograde -629 Mar 27 j 00:29 0°21'19 opposition 28° Mp 46'36 0°43'44 -621 May 04 j 00:45 5°**™**19'54 opposition min. Earth dist. -629 Mar 27 j 10:25 -621 May 03 j 19:20 28° Mp 45'32 17.49560 AU min. Earth dist. 5°M20'28 17.95127 AU -621 Jul 20 j 06:51 -629 Jun 12 j 04:42 direct 26° Mp41'40direct 3°M17'43 -629 Sep 13 j 02:07 0∘ଫ 7°ML33'16 0°17'38 conjunction -621 Nov 06 j 10:25 -629 Oct 01 j 13:07 conjunction 1°**2**08'55 0°38'22 minimum elong -621 Nov 06 j 10:25 7°M33'16 0°17'37 -629 Oct 01 j 13:07 minimum elong 1°**≙**08'55 0°38'23 max. Earth dist. -621 Nov 06 j 17:23 7°M34'20 19.98500 AU -629 Oct 01 j 03:09 -620 Feb 21 j 19:35 max. Earth dist. 1°**₽**07'21 19.51911 AU retrograde 11° ML45'43-628 Jan 16 j 12:14 -620 May 07 j 21:58 retrograde 5°**£**28'00 opposition 9°**M**45′22 0°17'50 opposition -628 Mar 31 j 02:26 3°**£**26'56 0°41'42 min. Earth dist. -620 May 07 j 14:13 9°M46'10 18.01889 AU min. Earth dist. -628 Mar 31 j 11:34 3°**£**25'58 17.54363 AU direct -620 Jul 24 j 04:05 7°M43'37 direct -628 Jun 16 j 06:10 1°**£**22'21 conjunction -620 Nov 09 j 23:53 11°ML57'35 0°14'28 conjunction -628 Oct 05 j 10:01 5°**-**48'21 0°36'26 minimum elong -620 Nov 09 j 23:53 11°M57'35 0°14'28 minimum elong -628 Oct 05 j 10:01 5°**£**48'21 0°36'25 behind sun begin -620 Nov 09 j 20:47 11°M57'07 max. Earth dist. -628 Oct 05 j 01:00 5°**Ω**46'56 19.56879 AU behind sun end -620 Nov 10 j 02:59 11°M58'02 retrograde -627 Jan 20 j 10:51 10°**£**06'42 max. Earth dist. -620 Nov 10 j 08:10 11°M58'50 20.05361 AU opposition -627 Apr 05 i 03:44 8°**£**05'45 0°39'24 -619 Jan 04 i 09:45 15°M min. Earth dist. -627 Apr 05 i 10:09 8°**£**05'04 17.59474 AU retrograde -619 Feb 25 i 11:32 16°M09'12 direct -627 Jun 21 i 08:38 6°**£**01'30 -619 Apr 21 i 09:25 15°RM opposition -619 May 12 j 18:20 14°ML09'00 0°14'15 -627 Oct 10 j 06:11 10°**2**26'11 0°34'16 min. Earth dist. -619 May 12 j 08:43 14°ML09'59 18.08838 AU conjunction minimum elong -627 Oct 10 j 06:11 10°**£**26'11 0°34'16 direct -619 Jul 28 j 22:39 12°M07'41 max. Earth dist. -627 Oct 10 j 00:04 10°**2**25'14 19.62120 AU -619 Oct 23 j 06:37 15°M. -626 Jan 25 j 06:27 14°**£**43'45 retrograde -626 Apr 10 j 04:47 -619 Nov 14 j 12:43 12°**△**42'55 0°36'52 conjunction 16°M20'06 0°11'14 opposition -626 Apr 10 j 10:13 12°**-**42′21 minimum elong -619 Nov 14 j 12:42 min. Earth dist. 17.64829 AU 16°M20'06 0°11'14 -626 Jun 26 j 09:27 -619 Nov 14 j 07:49 10°**£**39'00 behind sun begin direct 16°M19'22 behind sun end -619 Nov 14 j 17:36 16°M20′50 -626 Oct 15 j 01:14 -619 Nov 14 j 23:55 15°**2**02'17 0°31'53 max. Earth dist. 16°M21'48 20.12368 AU conjunction -626 Oct 15 j 01:15 15°**2**02'17 0°31'53 -618 Mar 02 j 02:43 20° M $_30'54$ minimum elong retrograde -626 Oct 14 j 20:00 15°**≙**01'28 19.67600 AU -618 May 17 j 14:03 18°M230'52 0°10'37 max. Earth dist. opposition 18°M 32'05 18.15875 AU -625 Jan 30 j 03:38 -618 May 17 j 02:08 retrograde 19°**₽**19'02 min. Earth dist. opposition -625 Apr 15 j 05:11 17°**≏**18'17 0°34'06 direct -618 Aug 02 j 18:07 16° M $_{\circ}30'00$ min. Earth dist. -625 Apr 15 j 08:01 17°**♀**17'59 17.70420 AU direct -625 Jul 01 j 10:45 15°**2**14'41 conjunction -618 Nov 19 j 00:31 20°M40'52 0°07'58 minimum elong -618 Nov 19 j 00:31 20°M40'52 0°07'58 -625 Oct 19 j 19:32 19°**△**36'30 0°29'19 behind sun begin -618 Nov 18 j 18:38 20° ML40'00conjunction minimum elong -625 Oct 19 j 19:32 19°**2**36'30 0°29'19 behind sun end -618 Nov 19 j 06:24 20°M41'44 max. Earth dist. -625 Oct 19 j 17:28 19°**2**36'11 19.73308 AU max. Earth dist. -618 Nov 19 j 12:57 20°M42'45 20.19429 AU retrograde -624 Feb 03 j 21:59 23°**♀**52'24 retrograde -617 Mar 06 j 17:13 24° M $_{50}$ '53 -624 Apr 19 i 05:11 -617 May 22 j 09:14 opposition 21°**⊆**51'43 0°31'08 opposition 22°M51'01 0°06'57 -624 Apr 19 i 06:33 -617 May 21 j 19:58 min. Earth dist. 21°**£**51'35 17.76233 AU min. Earth dist. 22°M52'22 18.22952 AU -624 Jul 05 j 10:42 -617 Aug 07 j 10:14 direct 19°**-**48′28 direct 20°M50'35 -624 Oct 23 i 12:32 24°**£**08'44 0°26'36 conjunction -617 Nov 23 i 11:52 24°ML59'57 0°04'41 conjunction minimum elong -624 Oct 23 i 12:32 24°**£**08'44 0°26'35 minimum elong -617 Nov 23 i 11:52 24°ML59'57 0°04'41 max. Earth dist. -624 Oct 23 i 11:36 24°**2**08'35 19.79244 AU behind sun begin -617 Nov 23 j 05:28 24°M 59'00 retrograde -623 Feb 07 j 17:33 behind sun end -617 Nov 23 j 18:16 25°ML00'53 28°**£**23'47 -623 Apr 24 j 04:23 -617 Nov 24 j 02:50 opposition 26°**△**23'08 0°28'00 max. Earth dist. 25°ML02'12 20.26491 AU -623 Apr 24 j 03:16 min. Earth dist. 26° **2**3'15 17.82290 AU retrograde -616 Mar 10 j 07:57 29°M09'10 -623 Jul 10 j 10:27 direct 24°**₽**20'13 opposition -616 May 26 j 03:35 27°ML09'28 0°03'17 min. Earth dist. -616 May 25 j 12:05 27°M-11'02 18.29976 AU -623 Oct 28 j 04:50 28°**△**38'55 0°23'43 direct -616 Aug 11 j 04:04 25° M 09'29conjunction -623 Oct 28 j 04:50 0°23'42 minimum elong 28°**£**38'55 max. Earth dist. -623 Oct 28 j 07:12 28°**2**39'17 19.85418 AU -616 Nov 26 j 22:21 conjunction 29°**M**₁7′20 0°01'20 -623 Nov 19 j 09:22 -616 Nov 26 j 22:22 0°M minimum elong 29°M₁17′20 0°01'19 retrograde -622 Feb 12 j 10:08 2°M53'04 behind sun begin -616 Nov 26 j 15:50 29°M16'23 opposition -622 Apr 29 j 02:49 0°M52'31 0°24'43 behind sun end -616 Nov 27 j 04:54 29°M18'17 min. Earth dist. -622 Apr 28 j 23:47 0°**M**52'50 17.88578 AU max. Earth dist. -616 Nov 27 j 14:20 29°M19'44 20.33457 AU -622 May 20 j 22:23 30°R<u>₽</u> -616 Dec 08 j 18:33 0°**∡** direct -622 Jul 15 j 09:23 28°**♀**49'57 retrograde -615 Mar 14 j 21:25 3°**∡**¹25'48

-615 Apr 20 j 06:49

desc. node

2°**₹**54'09

-622 Sep 06 j 05:17

 $0^{\circ}M$

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -615 in astronomical counting style is the year 616 BCE in historical counting style. 1°×726'14 0°00'-23 opposition -615 May 30 j 21:20 -608 Jan 20 i 21:47 0°궁 min. Earth dist. -615 May 30 j 05:06 1°**₹**'27'53 18.36882 AU retrograde -608 Apr 13 j 08:12 2°る35'34 0°る38'47 18.77983 AU -615 Jul 09 j 10:59 min. Earth dist. -608 Jun 29 j 03:31 30°RM -615 Aug 15 j 18:37 29°M26'39 -608 Jun 30 j 04:15 0°**る**36'18 0°-24'-20 direct opposition -615 Sep 21 j 00:05 -608 Jul 15 j 12:35 0°**√** 30°₽**⋌** -608 Sep 14 j 13:54 28°**х** 38'42 direct conjunction -615 Dec 01 j 08:25 3°**х** 33'03 0°-2'-3 -608 Nov 11 j 03:45 0°ರ -615 Dec 01 j 08:25 minimum elong 3°**х¹**33'03 0°02'05 behind sun begin -615 Dec 01 j 01:53 -608 Dec 29 j 13:46 3°**х** 32′06 conjunction 2°**る**36'11 0°-23'-21 -608 Dec 29 j 13:46 -615 Dec 01 j 14:57 behind sun end 3°×34'00 minimum elong 2°**る**36'11 0°23'22 -608 Dec 30 j 15:05 max. Earth dist. -615 Dec 02 j 02:19 3°**尽**35'44 20.40266 AU max. Earth dist. 2°る39'52 20.80405 AU -614 Mar 19 j 11:15 -607 Apr 17 j 16:29 6°**る**39'25 retrograde 7°**х** 40'45 retrograde -614 Jun 04 j 14:11 -607 Jul 04 j 16:05 4°**る**40'10 0°-27'-18 opposition 5°**∡**'41'19 0°-4'-2 opposition min. Earth dist. -614 Jun 03 j 19:53 5°**∡**'43'10 18.43578 AU min. Earth dist. -607 Jul 03 j 15:32 4°る42'38 18.82825 AU direct -614 Aug 20 j 10:50 3°**х** 42′07 direct -607 Sep 18 j 22:39 2°る42'50 conjunction -614 Dec 05 j 17:47 7°**∡**¹47'05 0°-5'-20 conjunction -606 Jan 02 j 19:29 6°る39'20 0°-25'-58 minimum elong -614 Dec 05 j 17:47 7°**∡**¹47′05 0°05'22 minimum elong -606 Jan 02 j 19:29 6°る39'20 0°26'00 behind sun begin -614 Dec 05 j 11:28 7°**∡**¹46′10 max. Earth dist. -606 Jan 03 j 21:51 6°る43'11 20.85120 AU behind sun end -614 Dec 06 j 00:06 7°**∡**¹48'00 retrograde -606 Apr 22 j 03:37 10°る42'08 max. Earth dist. -614 Dec 06 j 12:25 7°**х** 49'51 20.46837 AU min. Earth dist. -606 Jul 08 j 00:47 8°る45'35 18.87406 AU retrograde -613 Mar 23 j 23:48 11°**₹**'54'04 opposition -606 Jul 09 i 03:08 8°る42'57 0°-30'-7 min. Earth dist. -613 Jun 08 j 11:57 9°**х** 56'35 18.50029 AU direct -606 Sep 23 j 08:29 6°₹45'51 opposition -613 Jun 09 i 06:37 9°**∡**754'42 0°-7'-39 direct -613 Aug 25 j 00:18 7°**х** 55′50 conjunction -605 Jan 07 i 00:56 10°**る**41'29 0°-28'-27 minimum elong -605 Jan 07 i 00:56 10°**ठ**41'29 0°28'28 -613 Dec 10 i 02:34 11°**₹**′59'24 0°-8'-33 max. Earth dist. -605 Jan 08 j 03:56 10°る45'25 20.89555 AU conjunction -613 Dec 10 j 02:33 11°**₹**′59'24 0°08'34 retrograde -605 Apr 26 j 11:31 14°る43'56 minimum elong behind sun begin -613 Dec 09 j 20:50 11°**х** 58'34 min. Earth dist. -605 Jul 12 j 11:59 12°る47'24 18.91702 AU -613 Dec 10 j 08:17 -605 Jul 13 j 13:50 behind sun end 12°**₹**00'14 12°**る**44'49 0°-32'-47 opposition -613 Dec 10 j 22:46 -605 Sep 27 j 15:22 12°**₹**02'25 20.53143 AU 10°る47'58 max. Earth dist. direct -612 Mar 27 j 12:36 16°**₹**05'40 retrograde -612 Jun 12 j 22:06 14°**₹**06'22 0°-11'-11 -604 Jan 11 j 06:12 14°る42'49 0°-30'-47 opposition conjunction -604 Jan 11 j 06:12 -612 Jun 12 j 01:26 14°る42'48 0°30'49 min. Earth dist. 14°**₹**08'27 18.56179 AU minimum elong -604 Jan 12 j 09:54 14°る46'50 20.93693 AU -612 Aug 28 j 15:04 12°**₹**07'48 max. Earth dist. direct -604 Apr 29 j 22:01 18°る44'56 retrograde -604 Jul 16 j 23:49 -612 Dec 13 j 10:44 16°**≯**10'01 0°-11'-42 16°る45'54 0°-35'-16 conjunction opposition minimum elong -612 Dec 13 j 10:44 16°**∡**10'01 0°11'43 min. Earth dist. -604 Jul 15 j 20:36 16°る48'37 18.95661 AU behind sun begin -612 Dec 13 j 06:03 16°**₹**09'20 direct -604 Oct 01 j 00:32 14°**る**49'17 behind sun end -612 Dec 13 j 15:26 16°**х** 10′42 max. Earth dist. -612 Dec 14 j 07:36 16°**✗**13'06 20.59134 AU conjunction -603 Jan 14 j 11:22 18°る43'27 0°-32'-58 retrograde -611 Mar 31 j 23:35 20°**х** 15′35 minimum elong -603 Jan 14 j 11:22 18°る43'27 0°32'59 -611 Jun 17 j 12:46 18°**≯**16'18 0°-14'-39 max. Earth dist. -603 Jan 15 j 15:19 18°る47'29 20.97453 AU opposition min. Earth dist. -611 Jun 16 j 16:05 18°**⋠**18'22 18.62030 AU retrograde -603 May 04 j 05:46 22°る45'19 direct -611 Sep 02 j 03:09 16°**∡**17'59 min. Earth dist. -603 Jul 20 j 07:07 20°る48'58 18.99227 AU -603 Jul 21 i 09:20 20°**ප්**46'21 opposition 0°-37'-34 -611 Dec 17 j 18:20 20°**х** 18'55 0°-14'-46 -603 Oct 05 j 06:13 conjunction direct 18°る49'57 -611 Dec 17 j 18:21 minimum elong 20°**∡**18'55 0°14'48 -611 Dec 17 i 15:32 -602 Jan 18 j 16:30 22°る43'31 0°-34'-58 behind sun begin 20°**х** 18'31 conjunction -611 Dec 17 i 21:09 -602 Jan 18 i 16:30 behind sun end 20°**√**19'19 minimum elong 22°る43'31 0°35'00 -602 Jan 19 j 20:37 max. Earth dist. -611 Dec 18 j 16:36 20°**✗**22'12 20.64839 AU max. Earth dist. 22°る47'34 21.00808 AU -602 May 08 i 15:31 retrograde -610 Apr 05 j 11:22 24°×23'48 retrograde 26°₹45'11 min. Earth dist. -610 Jun 21 j 03:56 22°**✗**¹26'48 18.67592 AU opposition -602 Jul 25 j 18:25 24°る46'16 0°-39'-42 22°**∡**¹24'32 min. Earth dist. -610 Jun 22 j 02:38 -602 Jul 24 j 15:16 opposition 0°-18'00 24°る48'59 19.02351 AU -602 Oct 09 j 14:29 direct -610 Sep 06 j 16:10 20°**х** 26′28 direct 22°る50'03 conjunction -610 Dec 22 j 01:10 24°**≯**¹26′08 0°-17'-45 conjunction -601 Jan 22 j 21:30 26°る43'06 0°-36'-49 minimum elong -610 Dec 22 j 01:10 24°**≯**¹26′08 0°17'46 minimum elong -601 Jan 22 j 21:30 26°る43'06 0°36'51 -610 Dec 23 j 00:20 24°**✗**29'33 20.70261 AU max. Earth dist. -601 Jan 24 j 01:30 26°る47'08 21.03676 AU max. Earth dist. -609 Apr 09 j 20:45 28°**х** 30′26 -601 Mar 30 j 13:50 retrograde 0°≈ -609 Jun 26 j 15:58 26°**х**³31′09 0°-21'-14 retrograde -601 May 12 j 23:14 opposition 0°**≈**44'38 -609 Jun 25 j 17:14 -601 Jun 26 j 14:26 min. Earth dist. 26°**х** ³33′26 18.72905 AU 30°Ŗる -601 Jul 29 j 01:28 direct -609 Sep 11 j 02:50 24°**х** 33'19 min. Earth dist. 28°る48'19 19.04967 AU opposition -601 Jul 30 j 03:17 28°る45'44 0°-41'-38

conjunction

minimum elong

max. Earth dist.

-609 Dec 26 j 07:43

-609 Dec 26 j 07:43

-609 Dec 27 j 08:14

28°**₹**31'51

28°**渘**31'51

0°-20'-37

0°20'39

28°**✗**35'27 20.75454 AU

direct

-601 Oct 13 j 19:55

-600 Jan 14 j 19:02

26°**る**49'40

0°**≈**

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 21

Attention astronomi		ha waar 600 ii	n actronomical cour	ating ctyle ic the year	601 BCE in historical con	unting etyla	
conjunction	-600 Jan 27 j 02:45	0°≈42'16		direct	-593 Nov 14 j 13:57	28°≈33'14	
minimum elong	-600 Jan 27 j 02:45	0°≈42'16	0°38'29	direct	-592 Jan 13 j 06:10	28 ≈ 33 14 0° ∺	
max. Earth dist.	3				-392 Jan 13 J 00.10	0 K	
	-600 Jan 28 j 06:22	0 ≈46 14 4°≈43'40	21.06024 AU		-592 Feb 27 j 23:39	2° ¥ 25'16	09 441 22
retrograde	-600 May 16 j 08:14		19.07031 AU	conjunction	-592 Feb 27 j 23:39	2° X 25'16	
min. Earth dist.	-600 Aug 01 j 09:10			minimum elong	,		21.06058 AU
opposition	-600 Aug 02 j 11:26	2°≈44'47	0°-43′-21	max. Earth dist.	-592 Feb 28 j 21:49		21.06058 AU
direct	-600 Oct 17 j 03:02	0° ≈ 48'47		retrograde	-592 Jun 17 j 22:54	6° ∺ 27'22 4° ∺ 27'42	09 401 7
	500 I 20:00 00	4041102	00 201 57	opposition	-592 Sep 03 j 18:36		
conjunction	-599 Jan 30 j 08:00	4°≈41'02	0°-39'-57	min. Earth dist.	-592 Sep 02 j 22:25		19.05206 AU
minimum elong	-599 Jan 30 j 08:00	4°≈41'02	0°39'58	direct	-592 Nov 17 j 18:52	2°) 31′12	
max. Earth dist.	-599 Jan 31 j 10:59		21.07787 AU		501 M 02 : 06 21	60 V 22127	00 441 21
retrograde	-599 May 20 j 15:31	8°≈42'21	00 441 52	conjunction	-591 Mar 03 j 06:31	6° ¥ 23'37	0°-44'-21
opposition	-599 Aug 06 j 19:29	6°≈43'24	0°-44'-52	minimum elong	-591 Mar 03 j 06:31	6° ¥ 23'37	
min. Earth dist.	-599 Aug 05 j 18:50		19.08503 AU	max. Earth dist.	-591 Mar 04 j 03:47		21.04178 AU
direct	-599 Oct 21 j 08:12	4° ≈ 47'27		retrograde	-591 Jun 22 j 06:20	10°) € 26′04	10.02122.177
	500 E 1 02 : 12 00	00 - 2010 4	00 411 12	min. Earth dist.	-591 Sep 07 j 06:36		19.03133 AU
conjunction	-598 Feb 03 j 13:09	8°≈39'24	0°-41'-13	opposition	-591 Sep 08 j 00:55	8°¥26′20	0°-48'-48
minimum elong	-598 Feb 03 j 13:09	8°≈39'24	0°41'14	direct	-591 Nov 21 j 22:40	6°) 29'46	
max. Earth dist.	-598 Feb 04 j 15:33		21.08978 AU				
retrograde	-598 May 24 j 23:52	12° ≈ 40'39		conjunction	-590 Mar 07 j 13:45	10° ¥ 22'38	0°-43'-57
min. Earth dist.	-598 Aug 10 j 02:04		19.09407 AU	minimum elong	-590 Mar 07 j 13:45	10°) 22′38	0°43'58
opposition	-598 Aug 11 j 03:03	10° ≈ 41'38	0°-46'-10	max. Earth dist.	-590 Mar 08 j 09:44		21.01924 AU
direct	-598 Oct 25 j 14:42	8° ≈ 45'39		retrograde	-590 Jun 26 j 16:37	14° ¥ 25'32	
				opposition	-590 Sep 12 j 07:13	12° ∺ 25'45	
conjunction	-597 Feb 07 j 18:26	12° ≈ 37'22	0°-42'-18	min. Earth dist.	-590 Sep 11 j 13:19		19.00671 AU
minimum elong	-597 Feb 07 j 18:26	12° ≈ 37'22	0°42'19	direct	-590 Nov 26 j 03:58	10°) 29′03	
max. Earth dist.	-597 Feb 08 j 20:15		21.09607 AU				
	-597 Mar 24 j 06:23	15° ≈		conjunction	-589 Mar 11 j 21:45		0°-43'-20
retrograde	-597 May 29 j 06:36	16° ≈ 38'37		minimum elong	-589 Mar 11 j 21:45	14° ¥ 22'30	
	-597 Aug 06 j 20:40	15° R ≈		max. Earth dist.	-589 Mar 12 j 16:32		20.99249 AU
min. Earth dist.	-597 Aug 14 j 11:00	14° ≈ 41'49	19.09781 AU	retrograde	-589 Jul 01 j 00:54	18° ∺ 25'53	
opposition	-597 Aug 15 j 10:20	14° ≈ 39'29	0°-47'-14	opposition	-589 Sep 16 j 13:36	16° ∺ 26′02	
direct	-597 Oct 29 j 19:13	12° ≈ 43'27		min. Earth dist.	-589 Sep 15 j 21:56	16°\ 27'38	18.97775 AU
				iiiii. Lattii dist.	307 Bep 13 J 21.30		
	-596 Jan 14 j 11:16	15° ≈		direct	-589 Nov 30 j 07:58	14° H 29'13	
	-596 Jan 14 j 11:16	15° ≈		direct	-589 Nov 30 j 07:58	14°) 29′13	
conjunction	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51	15°≈ 16°≈35'01	0°-43'-10	direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25	14° ¥ 29'13 18° ¥ 23'20	0°-42'-31
conjunction minimum elong	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51	15°≈ 16°≈35'01 16°≈35'01	0°43'11	direct conjunction minimum elong	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25	14° ¥ 29'13 18° ¥ 23'20 18° ¥ 23'20	0°-42'-31 0°42'32
conjunction minimum elong max. Earth dist.	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37		conjunction minimum elong max. Earth dist.	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19	14°¥29'13 18°¥23'20 18°¥23'20 18°¥25'44	0°-42'-31
conjunction minimum elong max. Earth dist. retrograde	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19	0°43'11 21.09746 AU	conjunction minimum elong max. Earth dist. retrograde	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03	14°\£29'13 18°\£23'20 18°\£23'20 18°\£25'44 22°\£27'16	0°-42'-31 0°42'32 20.96137 AU
conjunction minimum elong max. Earth dist. retrograde opposition	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03	0°43'11 21.09746 AU 0°-48'-4	conjunction minimum elong max. Earth dist. retrograde opposition	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07	14°\(\)29'13 18°\(\)23'20 18°\(\)23'20 18°\(\)23'20 18°\(\)22'44 22°\(\)27'16 20°\(\)27'20	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25	0°43'11 21.09746 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21	14°\(\)29'13 18°\(\)23'20 18°\(\)23'20 18°\(\)25'44 22°\(\)27'16 20°\(\)27'20 20°\(\)28'51	0°-42'-31 0°42'32 20.96137 AU
conjunction minimum elong max. Earth dist. retrograde opposition	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03	0°43'11 21.09746 AU 0°-48'-4	conjunction minimum elong max. Earth dist. retrograde opposition	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07	14°\(\)29'13 18°\(\)23'20 18°\(\)23'20 18°\(\)23'20 18°\(\)22'44 22°\(\)27'16 20°\(\)27'20	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59	14°\(\)29'13 18°\(\)23'20 18°\(\)23'20 18°\(\)25'44 22°\(\)27'16 20°\(\)27'20 20°\(\)28'51 18°\(\)30'21	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41	14°\times 29'13 18°\times 23'20 18°\times 23'20 18°\times 23'20 18°\times 25'44 22°\times 27'16 20°\times 27'20 20°\times 28'51 18°\times 30'21 22°\times 25'13	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 19 j 15:41	14°\(\)29'13 18°\(\)23'20 18°\(\)23'20 18°\(\)22'44 22°\(\)27'16 20°\(\)22'51 18°\(\)30'21 22°\(\)25'13 22°\(\)25'13	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist.	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'16 20°\(\cdot\)27'20 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)27'24	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55	14°\times 29'13 18°\times 23'20 18°\times 23'20 18°\times 25'44 22°\times 27'16 20°\times 27'20 20°\times 28'51 18°\times 30'21 22°\times 25'13 22°\times 25'13 22°\times 25'13 22°\times 27'24 26°\times 29'42	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈33'59 24°≈33'52 22°≈34'29	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55 -587 Sep 24 j 02:56	14°\times 29'13 18°\times 23'20 18°\times 23'20 18°\times 25'44 22°\times 27'16 20°\times 27'20 20°\times 28'51 18°\times 30'21 22°\times 25'13 22°\times 25'13 22°\times 27'24 26°\times 29'42 24°\times 29'41	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 01:51	15°≈ 16°≈35'01 16°≈35'01 16°≈35'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52 22°≈34'29 22°≈36'42	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist.	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'16 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)27'24 26°\(\cdot\)29'42 24°\(\cdot\)29'41 24°\(\cdot\)30'58	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU
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conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 01:51 -595 Nov 06 j 04:59	15°≈ 16°≈35'01 16°≈35'01 16°≈38'37 20°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52 22°≈34'29 22°≈36'42 20°≈38'17	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41 19.09139 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33 -587 Dec 07 j 18:31	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'20 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)27'24 26°\(\cdot\)29'42 24°\(\cdot\)29'41 24°\(\cdot\)30'58 22°\(\cdot\)32'30	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10 18.90555 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 01:51 -595 Nov 06 j 04:59 -594 Feb 19 j 11:10	15°≈ 16°≈35'01 16°≈35'01 16°≈35'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52 22°≈34'29 22°≈36'42 20°≈38'17	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41 19.09139 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33 -586 Mar 24 j 01:37	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'20 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'14 24°\(\cdot\)29'42 24°\(\cdot\)29'42 24°\(\cdot\)29'42 24°\(\cdot\)30'58 22°\(\cdot\)32'30 26°\(\cdot\)28'10	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10 18.90555 AU
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 01:51 -595 Nov 06 j 04:59 -594 Feb 19 j 11:10	15°≈ 16°≈35'01 16°≈35'01 16°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52 22°≈36'42 20°≈38'17 24°≈29'53 24°≈29'53	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41 19.09139 AU 0°-44'-16 0°44'18	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Sul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33 -586 Mar 24 j 01:37 -586 Mar 24 j 01:37	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'16 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'13 22°\(\cdot\)25'14 26°\(\cdot\)29'42 24°\(\cdot\)29'41 24°\(\cdot\)30'58 22°\(\cdot\)32'30 26°\(\cdot\)28'10 26°\(\cdot\)28'10	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10 18.90555 AU 0°-40'-13 0°40'14
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 01:51 -595 Nov 06 j 04:59 -594 Feb 19 j 11:10 -594 Feb 19 j 11:10	15°≈ 16°≈35'01 16°≈35'01 16°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈32'29 20°≈35'59 24°≈33'52 22°≈36'42 20°≈38'17 24°≈29'53 24°≈29'53 24°≈33'17	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41 19.09139 AU	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. retrograde opposition min. Earth dist. direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Jul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33 -586 Mar 24 j 01:37 -586 Mar 24 j 01:37 -586 Mar 24 j 14:36	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'16 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'10 26°\(\cdot\)28'10 26°\(\cdot\)28'10 26°\(\cdot\)30'01	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10 18.90555 AU
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conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-596 Jan 14 j 11:16 -596 Feb 11 j 23:51 -596 Feb 13 j 01:02 -596 Jun 01 j 15:11 -596 Aug 18 j 17:09 -596 Aug 17 j 17:37 -596 Nov 02 j 01:06 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 15 j 05:23 -595 Feb 16 j 05:58 -595 Jun 05 j 21:26 -595 Aug 22 j 23:45 -595 Aug 22 j 23:45 -595 Aug 22 j 31:51 -595 Nov 06 j 04:59 -594 Feb 19 j 11:10 -594 Feb 19 j 11:10 -594 Feb 20 j 11:01 -594 Feb 20 j 11:01 -594 Aug 26 j 08:06 -594 Aug 27 j 06:09 -594 Nov 10 j 10:12 -593 Feb 23 j 17:08 -593 Feb 23 j 17:08 -593 Feb 24 j 16:21 -593 Mar 23 j 12:03 -593 Jun 14 j 13:16 -593 Aug 31 j 12:33	15°≈ 16°≈35'01 16°≈35'01 16°≈35'01 16°≈35'01 16°≈36'19 18°≈37'03 18°≈39'25 16°≈40'56 20°≈32'29 20°≈35'59 24°≈33'52 22°≈36'42 20°≈38'17 24°≈29'53 24°≈29'53 24°≈33'17 28°≈31'27 26°≈34'10 26°≈31'57 24°≈35'39 28°≈27'25 28°≈30'43 0° ₩ 2° ₩29'13 0° ₩29'13	0°43'11 21.09746 AU 0°-48'-4 19.09681 AU 0°-43'-49 0°43'50 21.09411 AU 0°-48'-41 19.09139 AU 0°-44'-16 0°44'18 21.08679 AU 19.08209 AU 0°-49'-4	conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition minimum elong max. Earth dist. conjunction minimum elong min. Earth dist. direct	-589 Nov 30 j 07:58 -588 Mar 15 j 06:25 -588 Mar 15 j 06:25 -588 Mar 15 j 23:19 -588 Jul 04 j 12:03 -588 Sep 19 j 20:07 -588 Sep 19 j 05:21 -588 Dec 03 j 13:59 -587 Mar 19 j 15:41 -587 Mar 19 j 15:41 -587 Mar 20 j 06:58 -587 Sul 08 j 20:55 -587 Sep 24 j 02:56 -587 Sep 23 j 14:33 -587 Dec 07 j 18:31 -586 Mar 24 j 01:37 -586 Jul 13 j 08:48 -586 Aug 19 j 22:19 -586 Sep 28 j 09:51 -586 Sep 28 j 09:51 -586 Sep 27 j 22:36 -586 Dec 12 j 01:24 -585 Mar 28 j 12:12 -585 Mar 28 j 12:12 -585 Mar 28 j 12:12	14°\(\cdot\)29'13 18°\(\cdot\)23'20 18°\(\cdot\)23'20 18°\(\cdot\)25'44 22°\(\cdot\)27'16 20°\(\cdot\)28'51 18°\(\cdot\)30'21 22°\(\cdot\)25'13 22°\(\cdot\)25'10 26°\(\cdot\)28'10 26°\(\cdot\)28'10 26°\(\cdot\)30'01 0°\(\cdot\) 0°\(\cdot\)30'01 26°\(\cdot\)33'15 30°\(\cdot\) 28°\(\cdot\)33'16 28°\(\cdot\)35'38 0°\(\cdot\)	0°-42'-31 0°42'32 20.96137 AU 0°-46'-26 18.94419 AU 0°-41'-28 0°41'30 20.92525 AU 0°-45'-10 18.90555 AU 0°-40'-13 0°40'14 20.88428 AU 0°-43'-40 18.86206 AU
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Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 22

Planetary Pheno			•	/ ·		, ,	0 22
	nical year style is used: T	-					10 22 401 444
min. Earth dist.	-585 Oct 02 j 08:15		18.81378 AU	min. Earth dist.	-577 Nov 04 j 18:37		18.33481 AU
direct	-585 Dec 16 j 06:46	0° Ƴ 39'49		direct	-576 Jan 18 j 04:40	3° 8 59'44	
	504 M 21 : 22-20	4° Ƴ 37'19	00 271 5	:	576 M 05 : 20-00	8° 8 07'20	09 171 22
conjunction	-584 Mar 31 j 23:28		0°-37'-3 0°37'06	conjunction	-576 May 05 j 20:00	_	0°-17'-23 0°17'23
minimum elong	-584 Mar 31 j 23:28	4° Υ 37'19		minimum elong	-576 May 05 j 20:00	8° 8 07'20	
max. Earth dist.	-584 Apr 01 j 08:20		20.78813 AU	max. Earth dist.	-576 May 05 j 13:15		20.30262 AU
retrograde	-584 Jul 21 j 06:37	8° Y 43'38	00 40100	retrograde	-576 Aug 24 j 16:27	12° 8 19'52	00 171 21
opposition	-584 Oct 06 j 00:18	6° Y 43'09		opposition	-576 Nov 08 j 01:29	10° 8 18'14	0°-17'-31
min. Earth dist.	-584 Oct 05 j 16:45		18.76154 AU	min. Earth dist.	-576 Nov 08 j 07:21		18.26986 AU
direct	-584 Dec 19 j 14:26	4° Ƴ 45'03		direct	-575 Jan 21 j 16:41	8° 8 17'18	
	502 A 05 : 11.22	000042124	09 251 12	:	575 M 10 : 14.20	120 42 (120	0°-14'-16
conjunction	-583 Apr 05 j 11:22	8° Υ '43'34 8° Υ '43'34	0°-35'-13 0°35'14	conjunction	-575 May 10 j 14:38	12° 8 26'28	0°-14'-16 0°14'17
minimum elong	-583 Apr 05 j 11:22			minimum elong	-575 May 10 j 14:38	12° 8 26'28	0 1417
max. Earth dist.	-583 Apr 05 j 18:47	8° γ 44 38 12° γ 50'33	20.73409 AU	behind sun begin	-575 May 10 j 11:41	12° 8 26'03	
retrograde	-583 Jul 25 j 17:23		00 271 50	behind sun end	-575 May 10 j 17:35	12° 8 26'53	20 22710 ATT
opposition	-583 Oct 10 j 07:59	10° Y 49'53		max. Earth dist.	-575 May 10 j 06:48		20.23718 AU
min. Earth dist.	-583 Oct 10 j 02:38		18.70589 AU		-575 Jun 26 j 00:09	15° 8	
direct	-583 Dec 23 j 20:53	8° Ƴ 51'25		retrograde	-575 Aug 29 j 08:28	16° 8 39'51	
	500 4 00:00 46	1000051101	00.221.10		-575 Nov 03 j 23:39	15° ₹ 8	00 1 4100
conjunction	-582 Apr 09 j 23:46	12° Υ 51'01	0°-33'-10	opposition	-575 Nov 12 j 13:17	14° 8 38'11	0°-14'00
minimum elong	-582 Apr 09 j 23:46	12° ℃ 51'01	0°33'11	min. Earth dist.	-575 Nov 12 j 20:57		18.20394 AU
max. Earth dist.	-582 Apr 10 j 04:48		20.67718 AU	direct	-574 Jan 26 j 05:11	12° 8 36'54	
retrograde	-582 Jul 30 j 06:01	16° ℃ 58'43			-574 Apr 14 j 04:09	15° 8	
opposition	-582 Oct 14 j 15:56	14° Y ′57′50					
min. Earth dist.	-582 Oct 14 j 11:48		18.64770 AU	conjunction	-574 May 15 j 09:59	16° 8 47'37	
direct	-582 Dec 28 j 05:04	12° Y ′59′00		minimum elong	-574 May 15 j 09:59	16° 8 47'37	0°11'02
				behind sun begin	-574 May 15 j 04:59	16° 8 46'53	
conjunction	-581 Apr 14 j 13:10	16° Ƴ 59'46	0°-30'-56	behind sun end	-574 May 15 j 14:59	16° 8 48'20	
minimum elong	-581 Apr 14 j 13:10	16° Ƴ 59'46	0°30'56	max. Earth dist.	-574 May 14 j 22:48		20.17082 AU
max. Earth dist.	-581 Apr 14 j 16:56		20.61782 AU	retrograde	-574 Sep 03 j 01:14	21° 8 01'53	
retrograde	-581 Aug 03 j 18:03	21° Y ′08′11		opposition	-574 Nov 17 j 01:50	19° 8 00'06	0°-10'-22
opposition	-581 Oct 19 j 00:12	19° Y 07'08	0°-32'-55	min. Earth dist.	-574 Nov 17 j 11:33		18.13710 AU
min. Earth dist.	-581 Oct 18 j 22:08		18.58737 AU	direct	-573 Jan 30 j 19:12	16° 8 58'27	
direct	-580 Jan 01 j 13:04	17° Y ′07'56					
				conjunction	-573 May 20 j 06:35	21° 8 10'45	0°-7'-44
conjunction	-580 Apr 18 j 03:15	21° Y ′09'56	0°-28'-32	minimum elong	-573 May 20 j 06:35	21° 8 10'45	0°07'45
minimum elong	-580 Apr 18 j 03:15	21° Y ′09'56	0°28'33	behind sun begin	-573 May 20 j 00:29	21° 8 09'52	
max. Earth dist.	-580 Apr 18 j 04:25		20.55678 AU	behind sun end	-573 May 20 j 12:40	21° 8 11'37	
retrograde	-580 Aug 07 j 07:15	25° Ƴ 19'07		max. Earth dist.	-573 May 19 j 18:12		20.10337 AU
opposition	-580 Oct 22 j 08:58	23° Y 17'54	0°-30'-10	retrograde	-573 Sep 07 j 18:34	25° 8 25'50	
min. Earth dist.	-580 Oct 22 j 08:07		18.52562 AU	opposition	-573 Nov 21 j 15:01	23° 8 23'58	0°-6'-39
direct	-579 Jan 04 j 21:48	21° Y 18'20		min. Earth dist.	-573 Nov 22 j 02:23	23° 8 22'45	18.06918 AU
				direct	-572 Feb 04 j 09:48	21° 8 21'55	
conjunction	-579 Apr 22 j 18:04	25° Y ′21′38					
minimum elong	-579 Apr 22 j 18:04	25° Y ′21′38	0°25'58	conjunction	-572 May 24 j 03:50	25° 8 35'47	0°-4'-22
max. Earth dist.	-579 Apr 22 j 18:09		20.49435 AU	minimum elong	-572 May 24 j 03:49	25° 8 35'47	0°04'22
retrograde	-579 Aug 11 j 20:37	29° Ƴ 31'37		behind sun begin	-572 May 23 j 21:09	25° 8 34'49	
opposition	-579 Oct 26 j 18:17	27° Ƴ 30′16	00 27! 15	to a to be a discourse and dis-			
main Earth dist	-3/9 Oct 20 J 18.17			behind sun end	-572 May 24 j 10:29	25° 8 36'45	
min. Earth dist.	-579 Oct 26 j 19:13	27° Y ′30'10	18.46269 AU	max. Earth dist.	-572 May 24 j 10:29 -572 May 23 j 12:00		20.03518 AU
direct	-						20.03518 AU
	-579 Oct 26 j 19:13	27° Y ′30'10		max. Earth dist.	-572 May 23 j 12:00	25° 8 33'26	20.03518 AU 0°-2'-52
	-579 Oct 26 j 19:13	27° Y ′30'10		max. Earth dist. retrograde	-572 May 23 j 12:00 -572 Sep 11 j 12:17	25° 8 33'26 29° 8 51'42 27° 8 49'43	0°-2'-52
direct	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32	27° Y '30'10 25° Y '30'21	18.46269 AU 0°-23'-14	max. Earth dist. retrograde opposition	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03	25° 8 33'26 29° 8 51'42 27° 8 49'43	0°-2'-52
direct conjunction	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44	27° Y '30'10 25° Y '30'21 29° Y '35'01 29° Y '35'01	18.46269 AU 0°-23'-14	max. Earth dist. retrograde opposition min. Earth dist.	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32	25°\d33'26 29°\d51'42 27°\d49'43 27°\d48'16 25°\d47'14	0°-2'-52
direct conjunction minimum elong	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44	27° Y '30'10 25° Y '30'21 29° Y '35'01 29° Y '35'01	18.46269 AU 0°-23'-14 0°23'16	max. Earth dist. retrograde opposition min. Earth dist. direct	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29	25°\d33'26 29°\d51'42 27°\d49'43 27°\d48'16 25°\d47'14	0°-2'-52 18.00087 AU
direct conjunction minimum elong	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38	18.46269 AU 0°-23'-14 0°23'16	max. Earth dist. retrograde opposition min. Earth dist. direct	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08	25°♥33'26 29°♥51'42 27°♥49'43 27°♥48'16 25°♥47'14 0°¶00'11	0°-2'-52 18.00087 AU
direct conjunction minimum elong max. Earth dist.	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU	max. Earth dist. retrograde opposition min. Earth dist. direct	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08	25°♥33'26 29°♥51'42 27°♥49'43 27°♥48'16 25°♥47'14 0°¶00'11	0°-2'-52 18.00087 AU
conjunction minimum elong max. Earth dist.	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist.	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 28 j 07:52	25° 833'26 29° 851'42 27° 849'43 27° 848'16 25° 847'14 0° Π00'11 0° Π	0°-2'-52 18.00087 AU 19.96678 AU
conjunction minimum elong max. Earth dist. retrograde opposition	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist.	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 29 j 01:49	25°♥33'26 29°♥51'42 27°♥49'43 27°♥48'16 25°♥47'14 0°∏00'11 0°∏	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53
conjunction minimum elong max. Earth dist. retrograde opposition	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Oct 31 j 06:21	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 28 j 07:52 -571 May 29 j 01:49 -571 May 29 j 01:47	25°\333'26 29°\551'42 27°\\$49'43 27°\\$48'16 25°\\$47'14 0°\\$100'11 0°\\$1 0°\\$102'40 0°\\$102'40	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Oct 31 j 06:21 -578 Dec 20 j 00:10	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°RY	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 29 j 01:49 -571 May 29 j 01:47 -571 May 28 j 19:00	25°\dash33'26 29°\dash51'42 27°\dash49'43 27°\dash48'16 25°\dash47'14 0°\D0'11 0°\D0'40 0°\D02'40 0°\D02'40 0°\D01'41	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Dec 20 j 00:10 -577 Jan 13 j 17:35	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°RY 29°Y44'05	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 28 j 07:52 -571 May 29 j 01:47 -571 May 29 j 01:47 -571 May 29 j 08:34	25°\\$33'26 29°\\$51'42 27°\\$49'43 27°\\$48'16 25°\\$47'14 0°\\$100'11 0°\\$1 0°\\$102'40 0°\\$101'41 0°\\$103'39	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Dec 20 j 00:10 -577 Jan 13 j 17:35	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°8Y 29°Y44'05 0°8	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end asc. node	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 07:52 -571 May 29 j 01:49 -571 May 29 j 01:47 -571 May 29 j 08:34 -571 Aug 30 j 04:27	25°\delta33'26 29°\delta51'42 27°\delta49'43 27°\delta48'16 25°\delta47'14 0°\D00'11 0°\D00'14 0°\D02'40 0°\D02'40 0°\D01'41 0°\D03'39 4°\D11'32	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Dec 20 j 00:10 -577 Jan 13 j 17:35 -577 Feb 07 j 08:28	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°8Y 29°Y44'05 0°8	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9 18.39915 AU	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end asc. node retrograde	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 07:52 -571 May 29 j 01:49 -571 May 29 j 01:47 -571 May 29 j 08:34 -571 Aug 30 j 04:27 -571 Sep 16 j 07:04	25° 833'26 29° 851'42 27° 849'43 27° 847'14 0° Π00'11 0° Π 0° Π02'40 0° Π02'40 0° Π01'41 0° Π03'39 4° Π11'32 4° Π19'22 2° Π17'16	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53 0°00'54
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Dec 20 j 00:10 -577 Jan 13 j 17:35 -577 Feb 07 j 08:28	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°RY 29°Y44'05 0°8 3°850'13 3°850'13	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9 18.39915 AU	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end asc. node retrograde opposition	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 29 j 01:49 -571 May 29 j 01:47 -571 May 29 j 08:34 -571 Aug 30 j 04:27 -571 Sep 16 j 07:04 -571 Nov 29 j 19:42	25° 833'26 29° 851'42 27° 849'43 27° 847'14 0° Π00'11 0° Π 0° Π02'40 0° Π02'40 0° Π01'41 0° Π03'39 4° Π11'32 4° Π19'22 2° Π17'16	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53 0°00'54
conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong	-579 Oct 26 j 19:13 -578 Jan 09 j 07:32 -578 Apr 27 j 09:44 -578 Apr 27 j 09:44 -578 Apr 27 j 07:05 -578 May 04 j 13:07 -578 Aug 16 j 10:29 -578 Oct 31 j 04:02 -578 Oct 31 j 06:21 -578 Dec 20 j 00:10 -577 Jan 13 j 17:35 -577 Feb 07 j 08:28 -577 May 02 j 02:29 -577 May 02 j 02:29	27°Y30'10 25°Y30'21 29°Y35'01 29°Y35'01 29°Y34'38 0°8 3°845'50 1°844'21 1°844'07 30°RY 29°Y44'05 0°8 3°850'13 3°850'13	18.46269 AU 0°-23'-14 0°23'16 20.43116 AU 0°-24'-9 18.39915 AU 0°-20'-22 0°20'23	max. Earth dist. retrograde opposition min. Earth dist. direct max. Earth dist. conjunction minimum elong behind sun begin behind sun end asc. node retrograde opposition min. Earth dist.	-572 May 23 j 12:00 -572 Sep 11 j 12:17 -572 Nov 25 j 05:03 -572 Nov 25 j 18:32 -571 Feb 08 j 01:29 -571 May 28 j 09:08 -571 May 29 j 01:49 -571 May 29 j 01:47 -571 May 29 j 01:47 -571 May 29 j 08:34 -571 Aug 30 j 04:27 -571 Sep 16 j 07:04 -571 Nov 29 j 19:42 -571 Nov 30 j 10:22	25° 833'26 29° 851'42 27° 849'43 27° 848'16 25° 847'14 0° Π00'11 0° Π 0° Π02'40 0° Π02'40 0° Π01'41 0° Π03'39 4° Π11'32 4° Π19'22 2° Π17'16 2° Π15'41 0° Π14'22	0°-2'-52 18.00087 AU 19.96678 AU 0°00'-53 0°00'54
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Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -570 in astronomical counting style is the year 571 BCE in historical counting style. -570 Jun 03 i 00:31 4°**Д**31'20 0°02'40 conjunction -563 Jul 06 i 09:19 6°939'46 0°25'41 conjunction minimum elong -570 Jun 03 i 00:30 4°**Ⅱ**31'20 0°02'39 -563 Jul 06 i 09:19 6°**ॐ**39'46 0°25'41 minimum elong behind sun begin -570 Jun 02 i 17:43 4°**Ⅲ**30'21 -563 Oct 23 j 08:22 11°901'43 retrograde -570 Jun 03 j 07:17 4°**I**I32'20 -562 Jan 04 j 19:19 behind sun end opposition 8°959'15 0°30'12 -570 Sep 21 j 01:28 8°**Ⅱ**48'49 -562 Jan 05 j 17:37 retrograde min. Earth dist. 8°956'48 17.47892 AU -570 Dec 04 j 11:00 6°**II**46'36 0°04'48 -562 Mar 21 j 10:00 opposition direct 6°953'39 -570 Dec 05 j 03:47 6°**Д**44'47 17.86533 AU -562 Jul 10 j 09:29 min. Earth dist. max. Earth dist. 11°5517'37 19.45895 AU -569 Feb 17 j 11:12 4°**Ⅱ**43'14 direct max. Earth dist. -569 Jun 07 j 03:48 8°**Д**58'43 19.83229 AU conjunction -562 Jul 11 j 12:46 11°**©**21'51 0°28'33 -562 Jul 11 j 12:46 minimum elong 11°921'51 0°28'34 conjunction -569 Jun 08 j 00:07 9°**I**101'46 0°06'07 retrograde -562 Oct 28 j 06:14 15°5544'15 -569 Jun 08 j 00:07 9°**Ⅱ**01'46 0°06'08 -561 Jan 09 j 16:46 minimum elong opposition 13°**©**41'51 0°33'19 -569 Jun 07 j 17:41 9°**Ⅱ**00′50 -561 Jan 10 j 16:42 behind sun begin min. Earth dist. 13°539'14 17.44068 AU behind sun end -569 Jun 08 j 06:33 9°**Ⅱ**02'43 direct -561 Mar 26 j 09:09 11°936'06 retrograde -569 Sep 25 j 22:02 13°**Ⅲ**19'58 opposition -569 Dec 09 j 03:01 11°**Ⅱ**17'39 0°08'39 conjunction -561 Jul 16 j 16:32 16°**©**05'21 0°31'14 min. Earth dist. -569 Dec 09 j 20:34 11°**Ⅱ**15'44 17.79964 AU minimum elong -561 Jul 16 j 16:32 16°9505'21 0°31'15 direct -568 Feb 22 j 05:56 9°**I**13'52 max. Earth dist. -561 Jul 15 j 12:17 16°900'58 19.42279 AU max. Earth dist. -568 Jun 11 j 01:19 13°**Ⅲ**30′28 19.76767 AU retrograde -561 Nov 02 j 06:42 20°528'09 opposition -560 Jan 14 j 14:58 18°9525'49 0°36'13 conjunction -568 Jun 12 j 00:06 13°**耳**33'54 0°09'33 min. Earth dist. -560 Jan 15 j 14:27 18°523'15 17.40660 AU minimum elong -568 Jun 12 j 00:06 13°**Ⅲ**33'54 0°09'33 direct -560 Mar 30 j 11:01 16°9519'54 behind sun begin -568 Jun 11 j 18:31 13°**Ⅱ**33'05 behind sun end -568 Jun 12 j 05:41 13°**I**I34'44 conjunction -560 Jul 20 i 20:30 20°950'06 0°33'44 retrograde -568 Sep 29 j 17:11 17°**I**52′50 minimum elong -560 Jul 20 i 20:30 20°950'06 0°33'44 -568 Dec 12 i 19:51 15°**I**I50'24 0°12'28 max. Earth dist. -560 Jul 19 i 16:32 20°545'44 19.39060 AU opposition min. Earth dist. -568 Dec 13 j 15:18 15°**Ⅱ**48'17 17.73649 AU retrograde -560 Nov 06 j 05:31 25°913'12 -567 Feb 26 j 00:01 13°**Ⅱ**46'12 opposition -559 Jan 18 j 14:03 23°910'55 direct 0°38'53 max. Earth dist. -567 Jun 16 j 01:45 18°**耳**04'13 19.70599 AU min. Earth dist. -559 Jan 19 j 14:45 23°508'13 17.37651 AU -559 Apr 04 j 12:26 direct 21°904'51 -567 Jun 17 j 00:52 18°**II**07'44 0°12'57 max. Earth dist. -559 Jul 24 j 19:29 conjunction 25°531'16 19.36258 AU -567 Jun 17 j 00:52 18°**耳**07'44 0°12'57 minimum elong -567 Jun 16 j 20:53 18°**Ⅱ**07'09 -559 Jul 26 j 00:35 behind sun begin conjunction 25°935'49 0°36'00 -567 Jun 17 j 04:52 -559 Jul 26 j 00:35 0°36'01 18°**∏**08′20 behind sun end minimum elong 25°935'49 -567 Oct 04 j 15:28 -559 Nov 11 j 06:14 22°**Ⅲ**27′20 29°959'09 retrograde retrograde -558 Jan 23 j 13:25 -567 Dec 17 j 13:17 20°II24'49 0°16'14 opposition opposition 27°956'53 0°41'17 27°554'15 17.35060 AU -567 Dec 18 j 08:55 20°**I**22'41 17.67652 AU -558 Jan 24 j 13:36 min. Earth dist. min. Earth dist. direct -566 Mar 02 j 20:14 18°**Ⅲ**20′15 direct -558 Apr 09 j 15:40 25°950'40 max. Earth dist. -566 Jun 21 j 01:13 22°**Ⅱ**39'26 19.64780 AU -558 Jul 25 j 06:34 $0^{\circ}\Omega$ max. Earth dist. -558 Jul 30 j 00:42 0°**Ω**17'53 19.33869 AU conjunction -566 Jun 22 j 02:09 22°II43'15 0°16'17 minimum elong -566 Jun 22 j 02:09 22°II43'14 0°16'17 conjunction -558 Jul 31 j 04:56 0°Ω22'18 0°38'02 retrograde -566 Oct 09 j 11:45 27°II03'29 minimum elong -558 Jul 31 j 04:56 0°**£**22′18 0°38'02 -566 Dec 22 j 07:42 25° II 00'56 0°19'54 retrograde -558 Nov 16 j 05:53 4°**Ω**45'45 opposition min. Earth dist. -566 Dec 23 j 05:03 24°**Д**58'36 17.62044 AU -557 Jan 28 j 13:38 2°**Ω**43'32 0°43'25 opposition -565 Mar 07 j 15:40 -557 Jan 29 j 14:33 2°**Ω**40'49 17.32888 AU direct 22°II56'01 min. Earth dist. -565 Jun 26 i 02:47 -557 Apr 14 i 17:59 0°**Ω**37'10 max. Earth dist. 27°**I**16'32 19.59380 AU direct -557 Aug 04 j 03:49 5°**Ω**04'44 19.31928 AU max. Earth dist. -565 Jun 27 i 04:06 27°**II**20'25 0°19'32 conjunction minimum elong -565 Jun 27 i 04:06 27°II20'25 0°19'32 conjunction -557 Aug 05 j 08:58 5°Ω09'18 0°39'48 minimum elong -565 Aug 12 i 12:39 0ಂತಾ -557 Aug 05 i 08:58 5°Ω09'18 0°39'48 -565 Oct 14 i 11:01 1°9541'16 retrograde -557 Nov 21 j 07:04 9°Ω32'48 retrograde -565 Dec 18 j 22:45 30°RⅡ opposition -556 Feb 02 j 14:10 7°**Ω**30'35 0°45'14 7°**Ω**27'57 17.31188 AU -565 Dec 27 j 02:42 29°**II**38'42 0°23'28 -556 Feb 03 j 14:24 opposition min. Earth dist. -565 Dec 27 j 23:49 min. Earth dist. 29°**Д**36'24 17.56863 AU direct -556 Apr 18 j 21:54 5°**Ω**24'06 -564 Mar 11 j 13:18 direct 27°**Ⅲ**33'32 max. Earth dist. -556 Aug 08 j 09:26 9°**Ω**52'16 19.30471 AU -564 May 28 j 20:24 000 max. Earth dist. -564 Jun 30 j 04:12 1°555'13 19.54423 AU -556 Aug 09 j 12:59 9°**Ω**56'36 0°41'17 conjunction minimum elong -556 Aug 09 j 12:59 9°**Ω**56'36 0°41'18 -564 Jul 01 j 06:33 1°959'16 0°22'40 retrograde -556 Nov 25 j 07:09 14°**Ω**20′02 conjunction -564 Jul 01 j 06:33 -555 Feb 06 j 15:13 12°**Ω**17'51 minimum elong 1°959'16 0°22'41 opposition 0°46'44 -564 Oct 18 j 08:20 retrograde 6°9520'42 min. Earth dist. -555 Feb 07 j 15:25 12°**Ω**15'13 17.29985 AU -564 Dec 30 j 22:42 opposition 4°9518'10 0°26'55 direct -555 Apr 24 j 00:39 10°**Ω**11'16 min. Earth dist. -564 Dec 31 j 21:23 4°9315'41 17.52150 AU direct -563 Mar 16 j 10:19 2°9512'45 conjunction -555 Aug 14 j 16:27 14°**Ω**43'57 0°42'29 max. Earth dist. -563 Jul 05 j 06:27 6°535'37 19.49942 AU minimum elong -555 Aug 14 j 16:27 14°**Ω**43'57 0°42'29 max. Earth dist. -555 Aug 13 j 12:31 14°**Ω**39'33 19.29541 AU Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 24

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recention, doctronomi	-555 Aug 18 j 22:14	15°Ω	r ustronomicur coun	conjunction	-547 Sep 22 j 03:49	22° m 49'31	0°41'17
retrograde	-555 Nov 30 j 08:03	19° Ω 07'17		minimum elong	-547 Sep 22 j 03:49	22° m 49'31	
opposition	-554 Feb 11 j 16:30	17° Ω 05'06	0°47'55	max. Earth dist.	-547 Sep 22 j 03:49	-	19.43805 AU
min. Earth dist.	-554 Feb 12 j 15:56		17.29336 AU	retrograde	-546 Jan 07 j 03:20	27° m 09'55	17.43003 AC
iiiii. Lattii dist.	-554 Apr 21 j 13:27	17 8002 33 15°RΩ	17.27330 AO	opposition	-546 Mar 22 j 09:26	25° m 08'40	0°45'14
direct	-554 Apr 29 j 04:44	13 ₹86 14° Ω 58'27		min. Earth dist.	-546 Mar 22 j 22:25	-	17.45849 AU
direct		14 ∂ €38 27 15° Ω		direct	•		17.43649 AU
	-554 May 06 j 19:32	13 06		direct	-546 Jun 07 j 11:38	23° Mp 03'32	
conjunction	-554 Aug 19 j 19:46	19° Ω 31'11	0°43'23	conjunction	-546 Sep 27 j 02:24	27° m 31'55	0°39'49
minimum elong	-554 Aug 19 j 19:46	19° Ω 31'11		minimum elong	-546 Sep 27 j 02:24	27° m ₀ 31'55	
max. Earth dist.	-554 Aug 18 j 17:55		19.29174 AU	max. Earth dist.	-546 Sep 26 j 13:17	-	19.47950 AU
retrograde	-554 Dec 05 j 08:02	23° Ω 54'19	19.29174 AU	max. Earth dist.	-546 Nov 07 j 14:45	0° ⊽	19.47930 AU
opposition	-553 Feb 16 j 18:05	23 δ <i>t</i> 34 19 21° Ω 52'10	0040146	retrograde	-545 Jan 12 j 02:38	0 == 1° £ 51'41	
min. Earth dist.			17.29259 AU	renograde	-545 Mar 23 j 18:35	30°RM)	
	-553 Feb 17 j 16:38	21 8ℓ 49 42 19° Ω 45'30	17.29239 AU	amnagition	3	29° Mp 50'35	0042127
direct	-553 May 04 j 08:19	19 6643 30		opposition min. Earth dist.	-545 Mar 27 j 11:25		17.50164 AU
agniumation	-553 Aug 24 j 22:30	24° Ω 18'08	0942150		-545 Mar 27 j 21:42	-	17.30104 AU
conjunction	C 3			direct	-545 Jun 12 j 15:38	27° m/45'46	
minimum elong	-553 Aug 24 j 22:30	24° Ω 18'08	0°43'59		-545 Aug 26 j 02:46	0∘ ⊽	
max. Earth dist.	-553 Aug 23 j 20:59		19.29411 AU		545.0 + 02:00.10	20.0.12102	0020106
retrograde	-553 Dec 10 j 08:18	28° Ω 41'03	0040116	conjunction	-545 Oct 02 j 00:19	2° ₾ 13'02	
opposition	-552 Feb 21 j 20:02	26° Ω 38'56		minimum elong	-545 Oct 02 j 00:19	2° ₾ 13'02	
min. Earth dist.	-552 Feb 22 j 17:36		17.29824 AU	max. Earth dist.	-545 Oct 01 j 13:45		19.52435 AU
direct	-552 May 08 j 12:13	24° Ω 32'19	10.20202 177	retrograde	-544 Jan 16 j 23:32	6° △ 32'08	0044100
max. Earth dist.	-552 Aug 28 j 01:36	29° 37 01'04	19.30303 AU	opposition	-544 Mar 31 j 13:20	4° £ 31'09	0°41'23
				min. Earth dist.	-544 Mar 31 j 22:55		17.54810 AU
conjunction	-552 Aug 29 j 00:43	29° Ω 04'43		direct	-544 Jun 16 j 16:54	2° ≏ 26'39	
minimum elong	-552 Aug 29 j 00:43		0°44'17				
	-552 Sep 12 j 16:23	0° m		conjunction	-544 Oct 05 j 21:10	6° £ 52'41	0°36'08
retrograde	-552 Dec 14 j 08:22	3° ™ 27'21		minimum elong	-544 Oct 05 j 21:10	6° ≙ 52'41	
opposition	-551 Feb 25 j 22:06	1°m/25'19		max. Earth dist.	-544 Oct 05 j 11:41		19.57241 AU
min. Earth dist.	-551 Feb 26 j 17:53		17.31031 AU	retrograde	-543 Jan 20 j 21:48	11° ≙ 11'03	
	-551 Apr 03 j 00:26	30°R€		opposition	-543 Apr 05 j 14:39	9° ≙ 10'10	
direct	-551 May 13 j 16:36	29° Ω 18'50		min. Earth dist.	-543 Apr 05 j 21:28		17.59748 AU
	-551 Jun 22 j 12:43	0° m		direct	-543 Jun 21 j 19:22	7° ≏ 05'57	
max. Earth dist.	-551 Sep 02 j 04:24	3° ™ 47'24	19.31842 AU				
				conjunction	-543 Oct 10 j 17:22	11° ⊆ 30'41	0°33'56
conjunction	-551 Sep 03 j 02:30	3° m 50'53		minimum elong	-543 Oct 10 j 17:22	11° ≏ 30'41	0°33'55
minimum elong	-551 Sep 03 j 02:30	3° m 50'53	0°44'16	max. Earth dist.	-543 Oct 10 j 10:44		19.62314 AU
retrograde	-551 Dec 19 j 07:38	8° mp 13'10		retrograde	-542 Jan 25 j 17:53	15° ≙ 48'14	
opposition	-550 Mar 03 j 00:12	6° Mp 11'16	0°49'15	opposition	-542 Apr 10 j 15:33	13° £ 47'27	0°36'28
min. Earth dist.	-550 Mar 03 j 19:09		17.32895 AU	min. Earth dist.	-542 Apr 10 j 21:30		17.64949 AU
direct	-550 May 18 j 20:03	4° m 04'58		direct	-542 Jun 26 j 20:01	11° ≏ 43'32	
max. Earth dist.	-550 Sep 07 j 07:51	8° Т р33'24	19.34025 AU		540.0 + 15:10.07	1.00 0 0.051	0021122
. ,.	550 C 00 : 02 40	99 m -26124	0042150	conjunction	-542 Oct 15 j 12:27	16° ♀ 06'51	0°31'32
conjunction	-550 Sep 08 j 03:49	8° Mp 36'34	0°43'58	minimum elong	-542 Oct 15 j 12:27	16° £ 06'51	0°31'32
minimum elong	-550 Sep 08 j 03:49	8° Mp 36'34	0°43'58	max. Earth dist.	-542 Oct 15 j 06:53		19.67661 AU
retrograde	-550 Dec 24 j 07:44	12° Mp 58'27	0040144	retrograde	-541 Jan 30 j 14:30	20° £ 23'35 18° £ 22'50	0022141
opposition	-549 Mar 08 j 02:29	10° m 56'42		opposition min. Earth dist.	-541 Apr 15 j 15:57		
min. Earth dist.	-549 Mar 08 j 19:12 -549 May 24 j 01:01	8° m 50'41	17.35360 AU		-541 Apr 15 j 19:06 -541 Jul 01 j 21:13	16° £ 2231	17.70426 AU
direct		~	10 26779 ATT	direct	-341 Jul 01 J 21.13	10 = 19 14	
max. Earth dist.	-549 Sep 12 j 10:09	13 11/1840	19.36778 AU	conjunction	-541 Oct 20 j 06:34	20° ₽ 41'04	0°28'56
conjunction	-549 Sep 13 j 04:24	13° m 21'39	0°43'22	minimum elong	-541 Oct 20 j 06:34	20° £ 41'04 20° £ 41'04	0°28'56
minimum elong		13° My 21'39		max. Earth dist.	-541 Oct 20 j 04:20		19.73275 AU
_	-549 Sep 13 j 04:24	13 My 43'07	0°43'23		3	20 ≗ 40 43 24° £ 56'56	19.73273 AU
retrograde	-549 Dec 29 j 06:08	17 m/43 07 15° m/41'32	0047152	retrograde	-540 Feb 04 j 09:16	24 ≗ 36 36 22° £ 56'14	0020141
opposition min. Earth dist.	-548 Mar 12 j 04:57			opposition min. Earth dist.	-540 Apr 19 j 15:54		17.76176 AU
	-548 Mar 12 j 20:58	-	17.38387 AU		-540 Apr 19 j 17:36		17.70170 AU
direct	-548 May 28 j 04:22	13° Mp 35'47	10 40067 ATT	direct	-540 Jul 05 j 21:40	20° £ 52'57	
max. Earth dist.	-548 Sep 16 j 11:56	18"1103'26	19.40067 AU	agniumation	540 Oct 22 : 22:20	250 0 12112	0026111
conjunction	-548 Sep 17 j 04:25	18° Mp 06'02	0°42'28	conjunction minimum elong	-540 Oct 23 j 23:39 -540 Oct 23 j 23:39	25° № 13'13 25° № 13'13	0°26'11 0°26'11
minimum elong		18° Mp 06'02	0°42'28	max. Earth dist.	-540 Oct 23 j 23:39		19.79176 AU
_	-548 Sep 17 j 04:25 -547 Jan 02 j 05:48		U 74 40		3	23° 2 28'14	19.19110 AU
retrograde		22° Tp 27'00	0°46'43	retrograde	-539 Feb 08 j 03:49	29° 2 28°14 27° 2 27'34	0°27'32
opposition	-547 Mar 17 j 07:07	20° m 25'35		opposition min. Earth dist.	-539 Apr 24 j 14:53		
min. Earth dist.	-547 Mar 17 j 20:40	-	17.41903 AU		-539 Apr 24 j 13:50		17.82227 AU
direct	-547 Jun 02 j 09:17	18° m 20'08		direct	-539 Jul 10 j 20:58	25° £ 24'37	

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 25

2	ical year style is used: T		•	,,		, ,	e 23
conjunction	-539 Oct 28 j 15:57	29° £ 43'20		inting style is the year 2	-532 Apr 03 j 13:06	unting style. 30°RM	
minimum elong	-539 Oct 28 j 15:57	29° £ 43′20		opposition	-532 May 26 j 14:43	28°M14'17	0°02'43
max. Earth dist.	-539 Oct 28 j 18:22		19.85370 AU	min. Earth dist.	-532 May 25 j 23:39		18.29865 AU
max. Earth dist.	-539 Nov 02 j 03:39	0°M	19.83370 AU	direct		26°M14'18	18.29803 AU
				direct	-532 Aug 11 j 15:35 -532 Nov 21 j 06:43	20 IIL1418	
retrograde	-538 Feb 12 j 21:18	3°M57'28	0024115		-532 NOV 21 J 00:43	0° X '	
opposition	-538 Apr 29 j 13:28	1°M56'54			522 N	00 700112	0000140
min. Earth dist.	-538 Apr 29 j 10:32		17.88556 AU	conjunction	-532 Nov 27 j 10:08	0° ₹22'13	0°00'49
T' (-538 Jun 30 j 20:28	30°R <u>Ω</u>		minimum elong	-532 Nov 27 j 10:07	0° ₹22'13	0°00'49
direct	-538 Jul 15 j 20:08	29° £ 54'19		behind sun begin	-532 Nov 27 j 03:36	0° ₹ 21'16	
	-538 Jul 30 j 15:25	0°M		behind sun end	-532 Nov 27 j 16:39	0° × ⁷ 23'10	20 22270 444
. ,.	520 M 02:07.07	40 m 11120	0020110	max. Earth dist.	-532 Nov 28 j 01:25		20.33278 AU
conjunction	-538 Nov 02 j 07:07	4°M11'28	0°20'18	desc. node	-531 Feb 23 j 10:47	4° 🗷 20'26	
minimum elong	-538 Nov 02 j 07:07	4°M11'28		retrograde	-531 Mar 15 j 09:12	4° ∡ ³30'42	
max. Earth dist.	-538 Nov 02 j 10:47		19.91841 AU	opposition	-531 May 31 j 08:24	2° ₹ 31'08	0°00'-57
retrograde	-537 Feb 17 j 14:17	8°M24'45		min. Earth dist.	-531 May 30 j 16:32		18.36630 AU
opposition	-537 May 04 j 11:23	6° ™ 24'17		direct	-531 Aug 16 j 06:27	0° ∡ 31'31	
min. Earth dist.	-537 May 04 j 05:51		17.95160 AU			_	
direct	-537 Jul 20 j 17:17	4° ™ 22'06		conjunction	-531 Dec 01 j 20:18	4° ∡ °38′00	0°-2'-34
				minimum elong	-531 Dec 01 j 20:18	4° ∡ °38′00	0°02'36
conjunction	-537 Nov 06 j 21:38	8° M 37'41		behind sun begin	-531 Dec 01 j 13:47	4° ₹ 37'03	
minimum elong	-537 Nov 06 j 21:38	8°M37'41	0°17'12	behind sun end	-531 Dec 02 j 02:49	4° ∡ ³38'57	
max. Earth dist.	-537 Nov 07 j 04:39	8°M38'45	19.98560 AU	max. Earth dist.	-531 Dec 02 j 13:40		20.39936 AU
retrograde	-536 Feb 22 j 06:45	12° ™ 50'07		retrograde	-530 Mar 19 j 22:43	8° ∡ ¹45'43	
opposition	-536 May 08 j 08:34	10° ™ 49'48	0°17'19	min. Earth dist.	-530 Jun 04 j 07:37	6° ₰ ¹48'04	18.43166 AU
min. Earth dist.	-536 May 08 j 00:59	10° ™ 50'35	18.01969 AU	opposition	-530 Jun 05 j 01:26	6° ₰ ¹46'16	0°-4'-36
direct	-536 Jul 24 j 14:30	8°M48'04		direct	-530 Aug 20 j 22:58	4° ₰ 747'01	
conjunction	-536 Nov 10 j 11:06	13°M02'04	0°14'00	conjunction	-530 Dec 06 j 05:35	8° ₰ 752'04	0°-5'-50
minimum elong	-536 Nov 10 j 11:06	13°M02'04	0°14'00	minimum elong	-530 Dec 06 j 05:34	8° ≯ 752'04	0°05'51
behind sun begin	-536 Nov 10 j 07:39	13°M01'33		behind sun begin	-530 Dec 05 j 23:19	8° ∡ ′51′09	
behind sun end	-536 Nov 10 j 14:34	13° ™ 02'35		behind sun end	-530 Dec 06 j 11:50	8° ≯ 52'58	
max. Earth dist.	-536 Nov 10 j 19:16	13° ™ 03'18	20.05453 AU	max. Earth dist.	-530 Dec 06 j 23:34	8° ∡ 754'45	20.46345 AU
	-536 Dec 13 j 19:38	15° ™		retrograde	-529 Mar 24 j 10:53	12° ₰ 59'04	
retrograde	-535 Feb 25 j 22:49	17° M 13'41		opposition	-529 Jun 09 j 17:52	10° ∡ ′59'40	0°-8'-12
opposition	-535 May 13 j 05:06	15° ™ 13'31	0°13'44	min. Earth dist.	-529 Jun 08 j 23:34	11° ∡ °01′31	18.49460 AU
min. Earth dist.	-535 May 12 j 19:32	15° ™ 14'30	18.08928 AU	direct	-529 Aug 25 j 11:52	9° ₰ 00'44	
	-535 May 18 j 17:10	15°RM₊					
direct	-535 Jul 29 j 09:18	13°M12'13		conjunction	-529 Dec 10 j 14:25	13° ∡ 04'23	0°-9'-2
	-535 Oct 03 j 22:13	15° ™		minimum elong	-529 Dec 10 j 14:25	13° ∡ °04′23	0°09'03
	J			behind sun begin	-529 Dec 10 j 08:49	13° ∡ ′03'34	
conjunction	-535 Nov 14 j 23:59	17° M 24'41	0°10'46	behind sun end	-529 Dec 10 j 20:01	13° ∡ *05'12	
minimum elong	-535 Nov 14 i 23:59	17° M 24'41	0°10'45	max. Earth dist.	-529 Dec 11 i 10:15	13° ∡ '07'20	20.52507 AU
behind sun begin	-535 Nov 14 i 18:55	17°M23'55		retrograde	-528 Mar 27 j 23:33	17° ∡ 10'40	
behind sun end	-535 Nov 15 j 05:04	17°M25'26		opposition	-528 Jun 13 j 09:10	15° ∡ 11'18	0°-11'-43
max. Earth dist.	-535 Nov 15 j 11:06		20.12449 AU	min. Earth dist.	-528 Jun 12 j 12:57		18.55488 AU
retrograde	-534 Mar 02 j 14:07	21°M35'28		direct	-528 Aug 29 j 02:55	13° ∡ 12'39	
opposition	-534 May 18 j 00:54	19°M35'29	0°10'05	anov	52011 48 27 J 02.55	15 % 1259	
min. Earth dist.	-534 May 17 j 13:18	19°M36'40		conjunction	-528 Dec 13 j 22:26	17° ∡ 14'57	0°-12'-10
direct	-534 Aug 03 j 04:47	17°M34'38		minimum elong	-528 Dec 13 j 22:26	17° ∡ 14'57	0°12'12
	55 . 11 ag 65 j 6 /	17 1103 . 30		behind sun begin	-528 Dec 13 j 17:58	17° × 714'19	0 12 12
conjunction	-534 Nov 19 j 12:01	21°M45'34	0°07'29	behind sun end	-528 Dec 14 j 02:55	17° ∡ 15'36	
minimum elong	-534 Nov 19 j 12:01	21°M45'34	0°07'29	max. Earth dist.	-528 Dec 14 j 18:58		20.58406 AU
behind sun begin	-534 Nov 19 j 06:02	21°M44'40	0 07 27	retrograde	-527 Apr 01 j 10:18	21°×720'33	20.30400710
behind sun end	-534 Nov 19 j 18:00	21°M46'27		opposition	-527 Jun 17 j 23:53	19° x ⁷ 21'12	0°-15'-10
max. Earth dist.	-534 Nov 20 j 00:06		20.19465 AU	min. Earth dist.	-527 Jun 17 j 03:26		18.61280 AU
retrograde	-533 Mar 07 j 05:13	25°M55'34	20.19403 AU	direct	-527 Sep 02 j 14:00	17° × 22'49	16.01260 AU
opposition	-533 May 22 j 20:13	23°M55'44	0°06'25	direct	-327 Sep 02 j 14.00	1/ * 2249	
• •					527 D 10:05.52	219.722140	00 151 12
min. Earth dist.	-533 May 22 j 07:09	23°M57'04	18.22950 AU	conjunction	-527 Dec 18 j 05:53	21° x ⁷ 23'49	0°-15'-13
direct	-533 Aug 07 j 21:43	21°M55'19		minimum elong	-527 Dec 18 j 05:52	21°×723'49	0°15'15
	522 Nr	20m 0444	0004111	behind sun begin	-527 Dec 18 j 03:31	21° x 23'29	
conjunction	-533 Nov 23 j 23:24	26°M04'44	0°04'11	behind sun end	-527 Dec 18 j 08:14	21° ₹ 24'09	20 (4001 177
minimum elong	-533 Nov 23 j 23:25	26°M04'44	0°04'10	max. Earth dist.	-527 Dec 19 j 04:13		20.64081 AU
behind sun begin	-533 Nov 23 j 16:58	26°M03'47		retrograde	-526 Apr 05 j 21:56	25° ₹ 28'45	00 101 20
behind sun end	-533 Nov 24 j 05:51	26°M05'41	20.26420 ***	opposition	-526 Jun 22 j 13:41	23° x 29'26	0°-18'-29
max. Earth dist.	-533 Nov 24 j 14:03		20.26439 AU	min. Earth dist.	-526 Jun 21 j 15:07		18.66848 AU
	-532 Feb 16 j 13:54	0° ∡7		direct	-526 Sep 07 j 03:38	21° ∡ ³31'18	
retrograde	-532 Mar 10 j 19:36	0° ≯ 13'58					

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -526 in astronomical counting style is the year 527 BCE in historical counting style. -526 Dec 22 j 12:46 25°**х** 31'05 0°-18'-10 -517 Jan 23 i 09:29 conjunction conjunction 27°る49'24 minimum elong minimum elong -526 Dec 22 i 12:46 25°**х** 31′05 0°18'12 -517 Jan 23 i 09:29 27°る49'24 0°37'03 27°る53'21 21.03325 AU max. Earth dist. -526 Dec 23 j 11:54 25°**х** 34'29 20.69544 AU max. Earth dist. -517 Jan 24 j 13:03 -525 Apr 10 j 08:06 29°**х** 35′26 -517 Mar 04 j 08:14 retrograde 0°≈≈ -525 Jun 26 j 04:11 -517 May 13 j 10:15 27°**⋌**³38'24 18.72230 AU 1°≈50'54 min. Earth dist. retrograde -525 Jun 27 j 02:56 -517 Jul 27 j 06:20 27°**∡**³36′07 0°-21'-42 30°R₹ opposition -525 Sep 11 j 13:07 25°**х** 38'14 -517 Jul 30 j 14:43 29°る51'59 0°-41'-52 direct opposition min. Earth dist. -517 Jul 29 j 13:10 29°る54'32 19.04579 AU 29°**∡** 36'53 0°-21'-1 conjunction -525 Dec 26 j 19:15 -517 Oct 14 j 07:31 direct 27°**る**55'50 -525 Dec 26 j 19:15 -517 Dec 25 j 23:04 minimum elong 29°**х** 36′53 0°21'02 0°≈ max. Earth dist. -525 Dec 27 j 19:57 29°**х** 40'31 20.74825 AU -524 Jan 02 j 08:37 0°궁 -516 Jan 27 j 14:45 1°**≈**48′28 0°-38'-40 conjunction -524 Apr 13 j 18:47 3°₹40'41 -516 Jan 27 j 14:45 retrograde minimum elong 1°**≈**48′28 0°38'42 -524 Jun 30 j 15:16 -516 Jan 28 j 18:08 opposition 1°る41'25 0°-24'-46 max. Earth dist. 1°**≈**52'24 21.05593 AU -524 Jun 29 j 14:29 min. Earth dist. 1°る43'54 18.77403 AU retrograde -516 May 16 j 20:00 5°≈49'49 -524 Aug 20 j 09:09 30°R.**✓** opposition -516 Aug 02 j 23:02 3°≈50'52 0°-43'-33 direct -524 Sep 15 j 01:05 29°**х** 43′48 min. Earth dist. -516 Aug 01 j 20:57 3°≈53'28 19.06558 AU -524 Oct 10 j 04:46 0°궁 direct -516 Oct 17 j 14:54 1°≈54'46 conjunction -524 Dec 30 j 01:18 3°る41'24 0°-23'-44 conjunction -515 Jan 30 j 19:52 5°**≈**47'00 0°-40'-7 minimum elong -524 Dec 30 j 01:18 3°₹41'24 0°23'46 minimum elong -515 Jan 30 j 19:52 5°≈47'00 0°40'07 max. Earth dist. -524 Dec 31 i 02:35 3°る45'06 20.79877 AU max. Earth dist. -515 Jan 31 i 22:35 5°≈50'50 21.07286 AU retrograde -523 Apr 18 j 04:28 7°る44'43 retrograde -515 May 21 j 02:22 9°≈48'15 min. Earth dist. -523 Jul 04 i 02:24 5°る47'58 18.82349 AU min. Earth dist. -515 Aug 06 i 06:31 7°≈51'41 19.07983 AU opposition -523 Jul 05 i 03:01 5°る45'30 0°-27'-43 opposition -515 Aug 07 i 07:01 7°**≈**49'14 0°-45'-2 direct -523 Sep 19 j 09:18 3°₹48'09 direct -515 Oct 21 j 19:42 5°≈53'10 -522 Jan 03 j 07:08 7°る44'48 0°-26'-20 -514 Feb 04 i 01:04 9°**≈**45'04 0°-41'-21 conjunction conjunction -522 Jan 03 j 07:08 7°る44'48 0°26'21 -514 Feb 04 j 01:04 9°≈45'04 0°41'23 minimum elong minimum elong -522 Jan 04 j 09:37 7°る48'40 20.84697 AU -514 Feb 05 i 03:33 max. Earth dist. max. Earth dist. 9°≈48'51 21.08462 AU -522 Apr 22 j 14:31 11°**ප්**47'40 -514 May 25 j 11:33 retrograde retrograde 13°≈46'15 -522 Jul 08 j 11:46 11°**≈**47'08 0°-46'-17 min. Earth dist. 9°る51'10 18.87027 AU -514 Aug 11 j 14:32 opposition -522 Jul 09 j 14:10 9°る48'32 0°-30'-30 -514 Aug 10 j 13:32 11°≈49'38 19.08909 AU min. Earth dist. opposition -522 Sep 23 j 19:23 7°る51'26 -514 Oct 26 j 02:35 direct 9°≈51'03 direct -521 Jan 07 j 12:29 11°る47'12 0°-28'-47 -513 Feb 08 j 06:09 13°≈42'44 0°-42'-23 conjunction conjunction -521 Jan 07 j 12:29 11°る47'12 0°28'49 -513 Feb 08 j 06:09 minimum elong minimum elong 13°≈42'44 0°42'24 max. Earth dist. -521 Jan 08 j 15:24 11°る51'07 20.89218 AU max. Earth dist. -513 Feb 09 j 08:04 13°≈46'26 21.09147 AU retrograde -521 Apr 26 j 23:23 15°る49'43 -513 Mar 03 j 04:31 15°≈ min. Earth dist. -521 Jul 12 j 23:05 13°る53'13 18.91395 AU retrograde -513 May 29 j 17:56 17°≈43'55 opposition -521 Jul 14 j 00:57 13°る50'38 0°-33'-8 opposition -513 Aug 15 j 21:48 15°≈44'42 0°-47'-18 direct -521 Sep 28 j 02:57 11°る53'48 min. Earth dist. -513 Aug 14 j 22:23 15°≈47'03 19.09374 AU -513 Sep 03 j 22:51 15°R≈ -520 Jan 11 j 17:55 15°る48'46 0°-31'-6 direct -513 Oct 30 j 06:49 13°**≈**48'35 conjunction -520 Jan 11 j 17:55 15°る48'46 0°31'07 -513 Dec 23 j 02:32 minimum elong 15°≈ -520 Jan 12 j 21:37 15°る52'47 20.93410 AU max. Earth dist. -520 Apr 30 j 09:22 19°る50'57 -512 Feb 12 j 11:33 17°≈40'07 0°-43'-13 retrograde conjunction -520 Jul 16 i 07:45 17°る54'38 18.95391 AU -512 Feb 12 j 11:33 17°≈40′07 0°43'14 min. Earth dist. minimum elong -520 Jul 17 i 10:52 17°**ප**51'56 -512 Feb 13 i 13:06 17°≈43'46 21.09404 AU opposition 0°-35'-36 max. Earth dist. -520 Oct 01 j 11:22 direct 15°**ප**55'19 retrograde -512 Jun 02 i 02:39 21°≈41'22 min. Earth dist. -512 Aug 18 i 04:38 19°≈44'26 19.09424 AU -519 Jan 14 j 23:09 19°る49'36 0°-33'-15 opposition -512 Aug 19 j 04:27 19°**≈**42'03 0°-48'-6 conjunction -519 Jan 14 j 23:09 19°る49'36 0°33'16 direct -512 Nov 02 j 12:51 17°≈45'53 minimum elong 19°る53'35 20.97189 AU -519 Jan 16 j 02:49 max. Earth dist. -519 May 04 j 17:08 -511 Feb 15 j 17:00 retrograde 23°る51'30 conjunction 21°≈37'25 0°-43'-50 -511 Feb 15 j 17:00 -519 Jul 21 j 20:37 opposition 21°る52'33 0°-37'-52 minimum elong 21°≈37'25 0°43'51 -519 Jul 20 j 18:33 18.98957 AU -511 Feb 16 j 17:51 21°**≈**40′57 min. Earth dist. 21°る55'09 max. Earth dist. 21.09248 AU -519 Oct 05 j 18:07 direct 19°**る**56'09 retrograde -511 Jun 06 j 09:24 25°≈38'47 opposition -511 Aug 23 j 11:09 23°**≈**39'23 0°-48'-41 -518 Jan 19 j 04:17 23°る49'47 0°-35'-14 min. Earth dist. -511 Aug 22 j 12:54 23°≈41'37 19.09079 AU conjunction -518 Jan 19 j 04:17 23°る49'47 0°35'16 direct -511 Nov 06 j 16:34 21°**≈**43'11 minimum elong -518 Jan 20 j 08:16 max. Earth dist. 23°る53'49 21.00519 AU -518 May 09 j 03:11 -510 Feb 19 j 22:36 retrograde 27°る51'28 conjunction 25°**≈**34'47 0°-44'-15 -518 Jul 25 j 02:52 -510 Feb 19 j 22:37 min. Earth dist. 25°る55'14 19.02035 AU minimum elong 25°**≈**34'47 0°44'16 opposition -518 Jul 26 j 05:50 25°**る**52'33 0°-39'-58 max. Earth dist. -510 Feb 20 j 23:00 25°≈38'15 21.08723 AU

-518 Oct 10 j 01:51

direct

23°る56'18

retrograde

opposition

-510 Jun 10 j 18:02

-510 Aug 27 j 17:35

29°≈36'21

27°≈36'52 0°-49'-2

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -510 in astronomical counting style is the year 511 BCE in historical counting style.

Attention, astronom	nical year style is used: T	he year -510 i	n astronomical cou	inting style is the year	511 BCE in historical co		
min. Earth dist.	-510 Aug 26 j 19:02	27° ≈ 39'09	19.08361 AU		-502 Sep 20 j 13:10	30° ₹ ₩	
direct	-510 Nov 10 j 22:02	25° ≈ 40'37		opposition	-502 Sep 28 j 21:31	29°) 39'31	0°-43'-22
				min. Earth dist.	-502 Sep 28 j 10:21	29°) (40′39	18.86879 AU
conjunction	-509 Feb 24 j 04:38	29° ≈ 32'24	0°-44'-28	direct	-502 Dec 12 j 13:07	27°) (42′04	
minimum elong	-509 Feb 24 j 04:38	29° ≈ 32'24	0°44'29		-501 Feb 27 j 12:17	0 ° Υ	
max. Earth dist.	-509 Feb 25 j 04:10	29° ≈ 35'44	21.07810 AU				
	-509 Mar 04 j 06:54	0° ∀		conjunction	-501 Mar 28 j 23:44	1° Ƴ 38'29	0°-38'-28
retrograde	-509 Jun 15 j 01:18	3°) 34′13		minimum elong	-501 Mar 28 j 23:44	1° Ƴ 38'29	0°38'29
opposition	-509 Aug 31 j 23:54	1°) 34'41	0°-49'-8	max. Earth dist.	-501 Mar 29 j 10:55	1° Ƴ 40′05	20.84494 AU
min. Earth dist.	-509 Aug 31 j 03:10	1°){ 36'47	19.07258 AU	retrograde	-501 Jul 18 j 05:32	5° Ƴ 44'01	
	-509 Oct 16 j 13:02	30°R ≈		opposition	-501 Oct 03 j 04:34	3° Ƴ 43'43	0°-41'-37
direct	-509 Nov 15 j 01:21	29° ≈ 38'23		min. Earth dist.	-501 Oct 02 j 19:54	3° Ƴ 44'36	18.82027 AU
	-509 Dec 14 j 00:51	0° ∀		direct	-501 Dec 16 j 19:00	1° Ƴ 45'57	
	·				v		
conjunction	-508 Feb 28 j 11:08	3°) 30′27	0°-44'-28	conjunction	-500 Apr 01 j 10:52	5° Ƴ 43'16	0°-36'-47
minimum elong	-508 Feb 28 j 11:08	3°) 30′27	0°44'28	minimum elong	-500 Apr 01 j 10:52	5° Ƴ 43'16	0°36'48
max. Earth dist.	-508 Feb 29 i 09:49	3°) 33'40	21.06524 AU	max. Earth dist.	-500 Apr 01 j 19:55	5° Ƴ 44'34	20.79468 AU
retrograde	-508 Jun 18 j 10:31	7°) 32'34		retrograde	-500 Jul 21 j 17:35	9° Ƴ 49'25	
min. Earth dist.	-508 Sep 03 j 09:27		19.05764 AU	opposition	-500 Oct 06 j 11:49	7° Ƴ 48'54	0°-39'-39
opposition	-508 Sep 04 j 06:08	5°) 33′00		min. Earth dist.	-500 Oct 06 j 04:07	7° Y 49'42	
direct	-508 Nov 18 j 06:40	3°) (35′00′	0 17 1	direct	-500 Dec 20 j 02:31	5° Υ 50'47	10.70023 110
direct	2001101 10 3 00.10	3 7(3030		direct	300 Bec 20 J 02.31	3 130 17	
conjunction	-507 Mar 03 j 17:55	7°) 29'04	0°-44'-15	conjunction	-499 Apr 05 j 22:29	9° Ƴ 49'06	0°-34'-53
minimum elong	-507 Mar 03 j 17:55	7° H 29'04	0°44'17	minimum elong	-499 Apr 05 j 22:29	9° Υ 49'06	0°34'54
max. Earth dist.	-507 Mar 04 j 15:28		21.04816 AU	max. Earth dist.	-499 Apr 06 j 06:01		20.74100 AU
retrograde	-507 Jun 22 j 18:06	11° X 32'08	21.04010 AC	retrograde	-499 Jul 26 j 03:37	13° Υ 55'54	20.74100 AC
-			0°-48'-40	-	-499 Oct 10 j 19:28	13 γ 55 54	00 27! 20
opposition min. Earth dist.	-507 Sep 08 j 12:28 -507 Sep 07 j 17:52		19.03842 AU	opposition min. Earth dist.	-499 Oct 10 j 13:58		18.71315 AU
	1 3	9 ★ 35'32 7° ★ 35'32	19.03642 AU		-499 Dec 24 j 08:59	9° Υ 56'43	18./1313 AU
direct	-507 Nov 22 j 10:02	/ Ж33 32		direct	-499 Dec 24 J 08.39	9 1 30 43	
	506 M 00 : 01-21	11°) €28'27	09 421 40		400 A 10 : 10.55	13° Y 56′06	0°-32'-49
conjunction	-506 Mar 08 j 01:21			conjunction	-498 Apr 10 j 10:55		
minimum elong	-506 Mar 08 j 01:21	11°) (28'27		minimum elong	-498 Apr 10 j 10:55	13°Υ56'06	0°32'49
max. Earth dist.	-506 Mar 08 j 21:41		21.02689 AU	max. Earth dist.	-498 Apr 10 j 16:17		20.68485 AU
retrograde	-506 Jun 27 j 04:23	15°) €31'23		retrograde	-498 Jul 30 j 16:44	18° ℃ 03'37	
opposition	-506 Sep 12 j 18:44	13°) € 31'43		opposition	-498 Oct 15 j 03:15	16° Y 02'42	
min. Earth dist.	-506 Sep 12 j 00:39		19.01477 AU	min. Earth dist.	-498 Oct 14 j 22:43		18.65588 AU
direct	-506 Nov 26 j 15:29	11° ∺ 35'10		direct	-498 Dec 28 j 17:28	14° Y 03'52	
						••	
conjunction	-505 Mar 12 j 09:24	15° ∺ 28'39		conjunction	-497 Apr 15 j 00:10		
minimum elong	-505 Mar 12 j 09:24	15° ∺ 28'39		minimum elong	-497 Apr 15 j 00:10	18° Y 04′26	
max. Earth dist.	-505 Mar 13 j 04:10		21.00075 AU	max. Earth dist.	-497 Apr 15 j 04:07		20.62651 AU
retrograde	-505 Jul 01 j 12:44	19°) 32′03		retrograde	-497 Aug 04 j 03:54	22° Y 12'39	
min. Earth dist.	-505 Sep 16 j 09:40		18.98608 AU	opposition	-497 Oct 19 j 11:35	20° Y 11'36	
opposition	-505 Sep 17 j 01:16	17° ∺ 32'20	0°-47'-16	min. Earth dist.	-497 Oct 19 j 09:11		18.59664 AU
direct	-505 Nov 30 j 19:35	15°) 35′38		direct	-496 Jan 02 j 00:30	18° Ƴ 12′26	
conjunction	-504 Mar 15 j 18:09	19°) 29'45	0°-42'-19	conjunction	-496 Apr 18 j 14:05	22° Y 14′13	
minimum elong	-504 Mar 15 j 18:09	19° ∺ 29'45		minimum elong	-496 Apr 18 j 14:05	22° Y 14'13	
max. Earth dist.	-504 Mar 16 j 11:03		20.96956 AU	max. Earth dist.	-496 Apr 18 j 15:40		20.56661 AU
retrograde	-504 Jul 04 j 23:34	23°) 33′39		retrograde	-496 Aug 07 j 18:06	26° Y 23'14	
opposition	-504 Sep 20 j 07:44	21°) 33′50	0°-46'-12	opposition	-496 Oct 22 j 20:14	24° Y 22′02	0°-29'-43
min. Earth dist.	-504 Sep 19 j 17:02	21°) ₹35′20	18.95217 AU	min. Earth dist.	-496 Oct 22 j 18:52	24° Ƴ 22'11	18.53605 AU
direct	-504 Dec 04 j 01:25	19°) 36′56		direct	-495 Jan 05 j 10:10	22° Y 22'31	
conjunction	-503 Mar 20 j 03:26	23° ∺ 31'45	0°-41'-15	conjunction	-495 Apr 23 j 04:55	26° Y 25'38	0°-25'-33
minimum elong	-503 Mar 20 j 03:26	23°) 31'45	0°41'15	minimum elong	-495 Apr 23 j 04:55	26° Y 25'38	0°25'34
max. Earth dist.	-503 Mar 20 j 18:28	23°) 33′54	20.93295 AU	max. Earth dist.	-495 Apr 23 j 05:15	26° Y 25'41	20.50537 AU
retrograde	-503 Jul 09 j 08:43	27°) 36′11			-495 Jul 05 j 12:46	8° 0	
opposition	-503 Sep 24 j 14:37	25°) 36′14	0°-44'-54	retrograde	-495 Aug 12 j 06:40	0° 8 35'28	
min. Earth dist.	-503 Sep 24 j 02:27		18.91291 AU	·	-495 Sep 19 j 09:33	30° ₹ Υ	
direct	-503 Dec 08 j 06:30	23°) 39′05		opposition	-495 Oct 27 j 05:31	28° Ƴ 34'10	0°-26'-47
	Ÿ			min. Earth dist.	-495 Oct 27 j 06:10		18.47425 AU
conjunction	-502 Mar 24 j 13:12	27°) 34'40	0°-39'-58	direct	-494 Jan 09 j 18:11	26° Ƴ 34'20	
minimum elong	-502 Mar 24 j 13:12	27°) (34'40			-494 Apr 16 j 17:12	0°8	
max. Earth dist.	-502 Mar 25 j 02:12		20.89134 AU		r .,	_	
	-502 May 08 j 19:05	0°Υ		conjunction	-494 Apr 27 j 20:29	0° 8 38'50	0°-22'-49
retrograde	-502 Jul 13 j 19:58	1° Υ 39'38		minimum elong	-494 Apr 27 j 20:29	0° 8 38'50	
		. 37 30			-r, j 20.22		

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -494 in astronomical counting style is the year 495 BCE in historical counting style. -494 Apr 27 i 18:15 0°**と**38'31 20.44318 AU max. Earth dist. conjunction -487 May 29 j 12:01 1°**Ⅱ**06′02 0°00'-23 -494 Aug 16 i 22:09 4°849'32 minimum elong -487 May 29 j 12:01 1°II06'02 0°00'24 retrograde -494 Oct 31 j 15:18 2°**8**48'09 0°-23'-40 behind sun begin -487 May 29 j 05:16 1°II05'03 opposition min. Earth dist. -494 Oct 31 j 17:18 2°847'57 18.41146 AU behind sun end -487 May 29 j 18:47 1°**II**07'01 1°**П**03'32 19.97321 AU -493 Jan 14 j 05:02 0°848'00 max. Earth dist. -487 May 28 j 19:20 direct -487 Jul 09 j 05:03 3°**Ⅲ**25′04 asc. node -493 May 02 j 13:14 4°853'59 0°-19'-56 -487 Sep 16 j 17:00 5°**Ⅲ**22'37 conjunction retrograde -493 May 02 j 13:14 4°**8**53'59 0°19'56 -487 Nov 30 j 06:22 3°II20'31 0°01'30 minimum elong opposition -493 May 02 j 09:43 4°853'28 20.37974 AU -487 Nov 30 j 21:13 3°**П**18'55 17.93863 AU max. Earth dist. min. Earth dist. -493 Aug 21 j 12:12 retrograde 9°**8**05'32 direct -486 Feb 13 j 05:14 1°**Ⅲ**17'37 opposition -493 Nov 05 j 01:40 7°**8**04'06 0°-20'-24 min. Earth dist. -493 Nov 05 j 05:51 7°**と**03'39 18.34736 AU -486 Jun 03 j 10:33 5°**Ⅱ**34'25 0°03'09 conjunction -492 Jan 18 j 15:06 5°**8**03'38 -486 Jun 03 j 10:32 $5^{\circ} \mathbf{II} 34'25$ 0°03'10 direct minimum elong -486 Jun 03 j 03:47 behind sun begin 5°**Ⅲ**33′26 conjunction -492 May 06 j 06:47 9°**8**11'07 0°-16'-55 behind sun end -486 Jun 03 j 17:18 5°**Ⅱ**35'24 minimum elong -492 May 06 j 06:47 9°**8**11'07 0°16'56 max. Earth dist. -486 Jun 02 j 14:51 5°**Д**31'28 19.90461 AU -492 May 06 j 00:13 max. Earth dist. 9°810'10 20.31507 AU retrograde -486 Sep 21 j 11:27 9°**I**51'46 retrograde -492 Aug 25 j 04:25 13°823'34 opposition -486 Dec 04 j 21:34 7°**Ⅱ**49'31 0°05'20 opposition -492 Nov 08 j 12:45 11°822'04 0°-17'00 min. Earth dist. -486 Dec 05 j 14:15 7°**П**47'43 17.87082 AU min. Earth dist. -492 Nov 08 j 18:36 11°**8**21'26 18.28201 AU direct -485 Feb 17 j 22:10 5°**Ⅱ**46'09 direct -491 Jan 22 j 03:05 9°821'15 conjunction -485 Jun 08 i 09:56 10°**Ⅱ**04'30 0°06'35 conjunction -491 May 11 i 01:15 13°**8**30'17 0°-13'-47 minimum elong -485 Jun 08 i 09:56 10°**耳**04'30 0°06'36 minimum elong -491 May 11 i 01:15 13°**8**30'17 0°13'47 behind sun begin -485 Jun 08 i 03:35 10°**Ⅱ**03'34 behind sun begin -491 May 10 j 21:52 13°829'48 behind sun end -485 Jun 08 j 16:17 10°**Ⅱ**05'26 -485 Jun 07 j 13:46 behind sun end -491 May 11 i 04:38 13°830'46 max. Earth dist. 10°**Ⅱ**01'28 19.83760 AU -485 Sep 26 i 07:19 max. Earth dist. -491 May 10 j 17:22 13°**8**29'08 20.24886 AU retrograde 14°**Ⅲ**22'35 -491 Jun 05 j 22:09 15°**8** opposition -485 Dec 09 j 13:23 12°**II**20'13 0°09'10 -491 Aug 29 j 20:07 17°**8**43'36 min. Earth dist. -485 Dec 10 j 06:52 12°**Ⅱ**18'19 17.80491 AU retrograde -491 Nov 13 i 00:37 -484 Feb 22 j 16:29 15°**8**42'01 0°-13'-28 direct 10°**Ⅱ**16′25 opposition -491 Nov 13 j 08:32 min. Earth dist. 15°**8**41'10 18.21502 AU max. Earth dist. -484 Jun 11 j 11:07 14°**Д**32'51 19.77298 AU -491 Nov 29 j 19:12 15°R₩ -490 Jan 26 j 15:56 14°**II**36'16 0°10'00 13°840'51 -484 Jun 12 j 09:48 direct conjunction -490 Mar 23 j 23:08 -484 Jun 12 j 09:48 14°**II**36'16 0°10'01 15°8 minimum elong -484 Jun 12 j 04:23 14°**Ⅲ**35'28 behind sun begin -490 May 15 j 20:39 -484 Jun 12 j 15:13 14°**Ⅲ**37′04 17°**8**51'26 0°-10'-33 conjunction behind sun end -490 May 15 j 20:40 -484 Sep 30 j 03:12 17°**8**51'26 0°10'34 18°**I**55′04 minimum elong retrograde behind sun begin -490 May 15 j 15:28 17°**8**50'41 opposition -484 Dec 13 j 06:07 16°**耳**52'35 0°12'58 behind sun end -490 May 16 j 01:51 17°**8**52'11 min. Earth dist. -484 Dec 14 j 01:13 16°**耳**50'31 17.74192 AU -490 May 15 j 09:22 17°**8**49'46 20.18121 AU max. Earth dist. direct -483 Feb 26 j 10:29 14°**Ⅱ**48′23 -490 Sep 03 j 12:30 retrograde 22°**8**05'37 max. Earth dist. -483 Jun 16 j 11:29 19°**Ц**06'15 19.71156 AU opposition -490 Nov 17 j 13:00 20°**8**03'55 0°-9'-50 min. Earth dist. -490 Nov 17 j 22:49 20°**8**02'52 18.14675 AU conjunction -483 Jun 17 j 10:19 19°**耳**09'43 0°13'23 direct -489 Jan 31 j 05:35 18°**8**02'20 minimum elong -483 Jun 17 j 10:19 19°**耳**09'43 0°13'23 behind sun begin -483 Jun 17 j 06:37 19°**Ⅲ**09'10 -489 May 20 j 17:08 22°**8**14'29 0°-7'-15 -483 Jun 17 j 14:01 19°**Ⅱ**10′16 conjunction behind sun end -489 May 20 j 17:08 -483 Oct 05 i 00:38 23°**Ⅲ**29'11 minimum elong 22°**8**14'29 0°07'15 retrograde -489 May 20 j 10:55 -483 Dec 17 j 23:32 21°**II**26'39 0°16'42 behind sun begin 22°**8**13'35 opposition -489 May 20 i 23:20 -483 Dec 18 j 18:52 21°**II**24'33 17.68226 AU behind sun end 22°815'23 min. Earth dist. -489 May 20 i 04:34 max. Earth dist. 22°812'38 20.11228 AU direct -482 Mar 03 i 06:28 19°**Ⅲ**22'05 -489 Sep 08 i 05:38 retrograde 26°829'29 max. Earth dist. -482 Jun 21 j 10:42 23°**Ц**41'05 19.65376 AU opposition -489 Nov 22 i 02:10 24°**8**27'40 0°-6'-6 min. Earth dist. -489 Nov 22 j 13:47 24°**8**26'25 18.07736 AU conjunction -482 Jun 22 j 11:32 23°II44'52 0°16'41 -488 Feb 04 j 20:50 22°**8**25'40 -482 Jun 22 j 11:32 23°**I**I44'52 0°16'42 direct minimum elong -482 Oct 09 j 21:20 28°**I**105'00 retrograde 26°**8**39'22 0°-3'-52 -482 Dec 22 j 17:43 26°**Ⅱ**02'25 conjunction -488 May 24 j 14:05 opposition 0°20'21 -488 May 24 j 14:05 26°**8**39'22 minimum elong 0°03'53 min. Earth dist. -482 Dec 23 j 14:43 26°**Д**00'08 17.62658 AU -488 May 24 j 07:23 behind sun begin 26°**8**38'24 direct -481 Mar 08 j 01:30 $23^{\circ} \Pi 57'32$ -488 May 24 j 20:47 26°840'20 behind sun end -488 May 23 j 22:13 26°837'01 20.04270 AU -481 Jun 27 j 13:27 28°**II**21'45 0°19'55 max. Earth dist. conjunction -488 Jul 27 j 12:10 -481 Jun 27 j 13:27 0°19'55 $\Pi^{\circ}0$ minimum elong 28°**Ⅲ**21'45 -488 Sep 11 j 22:38 -481 Jun 26 j 12:25 retrograde 0°**Ⅲ**55'11 max. Earth dist. 28°**Ⅲ**17'55 19.60013 AU -488 Oct 29 j 05:55 -481 Jul 24 j 20:28 30°R₩ 0ಂಣ -488 Nov 25 j 15:58 -481 Oct 14 j 20:24 opposition 28°**8**53'13 0°-2'-19 retrograde 2°9542'30 min. Earth dist. -488 Nov 26 j 05:29 28°**8**51'46 18.00778 AU opposition -481 Dec 27 j 12:44 0°939'56 0°23'54 direct -487 Feb 08 j 12:22 26°**8**50'46 min. Earth dist. -481 Dec 28 j 09:39 0°537'39 17.57500 AU

-480 Jan 12 j 01:02

30°R∏

-487 May 10 j 22:17

 $\Pi^{\circ}0$

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 29 Attention, astronomical year style is used: The year -480 in astronomical counting style is the year 481 BCE in historical counting style.

Attention, astronom	ical year style is used: T	he year -480 ii	n astronomical cou	nting style is the year	481 BCE in historical co	unting style.	
direct	-480 Mar 11 j 23:38	28° Ⅱ 34'48		min. Earth dist.	-472 Feb 03 j 23:56	8° Ω 27'32	17.30775 AU
	-480 May 09 j 03:40	0∘ფ		direct	-472 Apr 19 j 07:30	6° Ω 23'38	
conjunction	-480 Jul 01 j 15:41	3°500'21	0°23'03	conjunction	-472 Aug 09 j 21:52	10° Ω 56′07	0°41'24
minimum elong	-480 Jul 01 j 15:41	3°900'21	0°23'02	minimum elong	-472 Aug 09 j 21:52	10° Ω 56′07	0°41'24
max. Earth dist.	-480 Jun 30 j 13:22	2° 9 56'18	19.55057 AU	max. Earth dist.	-472 Aug 08 j 18:23	10° Ω 51'47	19.30026 AU
retrograde	-480 Oct 18 j 17:44	7° 5 21'42			-472 Oct 30 j 08:01	15° Ω	
opposition	-480 Dec 31 j 08:39	5° © 19'11	0°27'19	retrograde	-472 Nov 25 j 16:08	15° Ω 19'37	
min. Earth dist.	-479 Jan 01 j 07:15	5°916'43	17.52764 AU	_	-472 Dec 22 j 10:56	15° R €	
direct	-479 Mar 16 j 20:04	3°913'48		opposition	-471 Feb 07 j 00:39	13° Ω 17′21	0°46'51
	,			min. Earth dist.	-471 Feb 08 j 00:57		17.29520 AU
conjunction	-479 Jul 06 j 18:37	7° © 40'40	0°26'02	direct	-471 Apr 24 j 10:24	11° Ω 10'43	
minimum elong	-479 Jul 06 j 18:37	7°5540'40			-471 Aug 03 j 13:05	15° Ω	
max. Earth dist.	-479 Jul 05 j 15:50		19.50521 AU	max. Earth dist.	-471 Aug 13 j 21:35		19.29072 AU
retrograde	-479 Oct 23 j 17:54	12°502'32	19.00021110	man. Bartii dibt.	., 111ag 15 j 2 1.55	10 0000 02	19.290,2110
opposition	-478 Jan 05 j 05:07	10°500'04	0°30'35	conjunction	-471 Aug 15 j 01:21	15° Ω 43'25	0°42'34
min. Earth dist.	-478 Jan 06 j 03:33		17.48422 AU	minimum elong	-471 Aug 15 j 01:21	15° Ω 43'25	0°42'34
direct	-478 Mar 21 j 20:16	7°954'30	17.40422710	retrograde	-471 Nov 30 j 16:43	20°Ω06'49	0 42 54
uncet	-476 Wiai 21 j 20.10	7 33430		opposition	-470 Feb 12 j 01:45	18°Ω04'35	0°47'50
conjunction	-478 Jul 11 j 22:06	12° © 22'33	0°28'53	min. Earth dist.	-470 Feb 13 j 00:58		17.28880 AU
minimum elong	-478 Jul 11 j 22:06	12°922'33		direct	-470 Apr 29 j 13:51	$15^{\circ} \Omega 57'53$	17.28880 AU
max. Earth dist.							10 20740 ATT
	-478 Jul 10 j 18:28		19.46359 AU	max. Earth dist.	-470 Aug 19 j 03:12	20° 8 (20°39	19.28748 AU
retrograde	-478 Oct 28 j 16:03	16°5944'54	0022140		470 4 20:04 42	200 020141	00.4212.6
opposition	-477 Jan 10 j 02:41	14°5542'29		conjunction	-470 Aug 20 j 04:42	20° Ω 30'41	
min. Earth dist.	-477 Jan 11 j 02:48		17.44459 AU	minimum elong	-470 Aug 20 j 04:42	20° Ω 30'41	0°43'25
direct	-477 Mar 26 j 18:34	12° © 36'43		retrograde	-470 Dec 05 j 17:43	24° £ 53'55	
max. Earth dist.	-477 Jul 15 j 21:19	17°901'25	19.42580 AU	opposition	-469 Feb 17 j 03:25	22° Ω 51'44	
				min. Earth dist.	-469 Feb 18 j 01:48		17.28877 AU
conjunction	-477 Jul 17 j 01:47	17° © 05'51		direct	-469 May 04 j 17:31	20° Ω 45'05	
minimum elong	-477 Jul 17 j 01:47	17° © 05'51	0°31'33	max. Earth dist.	-469 Aug 24 j 06:13	25° Ω 13'49	19.29084 AU
retrograde	-477 Nov 02 j 16:48	21° © 28'35					
opposition	-476 Jan 15 j 00:49	19° 5 26'13	0°36'32	conjunction	-469 Aug 25 j 07:22	25° Ω 17'47	
min. Earth dist.	-476 Jan 16 j 00:29	19° 5 23'38	17.40869 AU	minimum elong	-469 Aug 25 j 07:22	25° Ω 17'47	0°44'01
direct	-476 Mar 30 j 21:01	17° 5 20'16		retrograde	-469 Dec 10 j 17:33	29° Ω 40'49	
max. Earth dist.	-476 Jul 20 j 01:21	21° © 45'55	19.39174 AU	opposition	-468 Feb 22 j 05:19	27° Ω 38'42	0°49'16
				min. Earth dist.	-468 Feb 23 j 02:27	27° Ω 36′25	17.29559 AU
conjunction	-476 Jul 21 j 05:50	21° © 50'21	0°34'00	direct	-468 May 08 j 20:36	25° Ω 32'08	
minimum elong	-476 Jul 21 j 05:50	21° © 50'21	0°34'01	max. Earth dist.	-468 Aug 28 j 11:10	0° ™ 01'04	19.30105 AU
retrograde	-476 Nov 06 j 15:15	26° © 13'24			-468 Aug 28 j 04:28	0° m)	
opposition	-475 Jan 18 j 23:46	24°9511'04	0°39'09				
min. Earth dist.	-475 Jan 20 j 00:47	24°908'20	17.37674 AU	conjunction	-468 Aug 29 j 09:49	0° ™ 04'39	0°44'16
direct	-475 Apr 04 j 21:01	22°904'57		minimum elong	-468 Aug 29 j 09:49	0° m/04'39	0°44'16
max. Earth dist.	-475 Jul 25 j 04:26	26°531'15	19.36189 AU	retrograde	-468 Dec 14 j 18:32	4° m) 27'23	
	,			opposition	-467 Feb 26 j 07:17	2° m/25'24	0°49'23
conjunction	-475 Jul 26 j 09:49	26° © 35'51	0°36'14	min. Earth dist.	-467 Feb 27 j 02:55		17.30897 AU
minimum elong	-475 Jul 26 j 09:49	26° © 35'51		direct	-467 May 14 j 01:07	0° m) 18'59	
	-475 Sep 26 j 01:32	0°N				v .%	
retrograde	-475 Nov 11 j 16:17	0° Ω 59'09		conjunction	-467 Sep 03 j 11:42	4° m 51'10	0°44'14
	-475 Dec 29 j 15:24	30°Rூ		minimum elong	-467 Sep 03 j 11:42	4° mp 51'10	0°44'14
opposition	-474 Jan 23 j 23:09	28°956'50	0°41'31	max. Earth dist.	-467 Sep 02 j 13:50		19.31769 AU
min. Earth dist.	-474 Jan 24 j 23:30		17.34900 AU	retrograde	-467 Dec 19 j 17:26	9° m 13'34	17.51707710
direct	-474 Apr 10 j 01:14	26°950'33	17.54700 AC	opposition	-466 Mar 03 j 09:32	7° M) 11'43	0°49'10
uncet	-474 Jul 09 j 10:23	0° Ω		min. Earth dist.	-466 Mar 04 j 04:15		17.32869 AU
may Earth dist	-474 Jul 30 j 09:32		19.33629 AU		-466 May 19 j 04:32	5° m) 05'30	17.32809 AU
max. Earth dist.	-4/4 Jul 30 J 09.32	1 861/39	19.55029 AU	direct	-400 May 19 J 04.32	3 IIJUS 30	
	474 I1 21:14.05	10 (000)	0020112	:	466 C 00 : 12.06	00 m 27112	0942152
conjunction	-474 Jul 31 j 14:05	1° Ω 22'08	0°38'13	conjunction	-466 Sep 08 j 13:06	9° m 37'12	0°43'53
minimum elong	-474 Jul 31 j 14:05	1° Ω 22'08	0°38'14	minimum elong	-466 Sep 08 j 13:06	9° m/37'12	0°43'54
retrograde	-474 Nov 16 j 15:10	5° Ω 45'34	0042125	max. Earth dist.	-466 Sep 07 j 17:29	9° Mp 34'06	19.34035 AU
opposition	-473 Jan 28 j 23:12	3° Ω 43'16	0°43'36	retrograde	-466 Dec 24 j 17:46	13° m 59'13	
min. Earth dist.	-473 Jan 30 j 00:24		17.32578 AU	opposition	-465 Mar 08 j 11:53	11° m 57'32	0°48'37
direct	-473 Apr 15 j 03:09	1° Ω 36'51		min. Earth dist.	-465 Mar 09 j 04:38		17.35394 AU
		_		direct	-465 May 24 j 10:12	9° m 51'34	
conjunction	-473 Aug 05 j 18:05	6° Ω 08'57	0°39'57				
minimum elong	-473 Aug 05 j 18:05	6° Ω 08'57		conjunction	-465 Sep 13 j 13:55	14° m 22'38	0°43'15
max. Earth dist.	-473 Aug 04 j 12:50		19.31562 AU	minimum elong	-465 Sep 13 j 13:55	14° m 22'38	0°43'15
retrograde	-473 Nov 21 j 16:05	10° Ω 32'28		max. Earth dist.	-465 Sep 12 j 19:37		19.36825 AU
opposition	-472 Feb 02 j 23:41	8° Ω 30'11	0°45'23	retrograde	-465 Dec 29 j 15:53	18° m) 44'11	

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -464 in astronomical counting style is the year 465 BCE in historical counting style. -464 Mar 12 j 14:23 16° m 42'39 0°47'44 opposition opposition -456 Apr 20 j 01:19 23°**2**56'46 0°30'18 min. Earth dist. -464 Mar 13 i 06:25 16° Mp 40'56 17.38436 AU min. Earth dist. -456 Apr 20 j 03:04 23°**♀**56'35 17.75653 AU -464 May 28 j 13:14 14° M) 36'56 direct -456 Jul 06 j 06:25 21°**♀**53'25 direct -464 Sep 17 j 14:00 19° m 07'15 0°42'19 -456 Oct 24 j 09:35 26°**♀**13'47 0°25'50 conjunction conjunction -464 Sep 17 j 14:00 -456 Oct 24 j 09:35 19°**m** 07'15 0°42'19 minimum elong 26°**≙**13'47 0°25'49 minimum elong -464 Sep 16 j 21:32 -456 Oct 24 j 08:32 19° Mp 04'39 max. Earth dist. 26° **2**13'37 19.78680 AU max. Earth dist. 19.40100 AU -463 Jan 02 j 15:50 -455 Jan 06 j 17:27 retrograde 23° m 28'16 0° M -463 Mar 17 j 16:43 -455 Feb 08 j 14:06 0°M28'51 opposition 21°M 26'53 0°46'32 retrograde -463 Mar 18 j 06:26 -455 Mar 14 j 07:25 min. Earth dist. 21° m 25'25 17.41909 AU 30°ŖΩ 28°**≏**28'12 0°27'08 direct -463 Jun 02 j 18:38 19° Mp 21'27 opposition -455 Apr 25 j 00:28 min. Earth dist. -455 Apr 24 j 23:12 28°**2**28'20 17.81766 AU -463 Sep 22 j 13:32 23° Mp 50'52 0°41'06 direct -455 Jul 11 j 06:28 conjunction 26°**♀**25'13 -463 Sep 22 j 13:32 minimum elong 23° m 50'52 0°41'05 -455 Oct 17 j 03:47 0°M -463 Sep 21 j 22:49 max. Earth dist. 23°M)48'32 19.43771 AU -462 Jan 07 j 13:12 retrograde 28° Mp 11'17 conjunction -455 Oct 29 j 01:57 0°**M**44′05 0°22'56 opposition -462 Mar 22 j 18:58 26° Mp 10'01 0°45'00 minimum elong -455 Oct 29 j 01:57 0°M44'05 0°22'55 min. Earth dist. -462 Mar 23 j 08:10 26° Mp 08'37 17.45771 AU max. Earth dist. -455 Oct 29 j 04:21 0°ML44'27 19.84946 AU direct -462 Jun 07 j 20:59 24° m 04'52 retrograde -454 Feb 13 j 07:06 4°M58'19 opposition -454 Apr 29 j 23:06 2°M57'49 0°23'49 conjunction -462 Sep 27 j 12:16 28° m 33'16 0°39'36 min. Earth dist. -454 Apr 29 j 20:10 2°ML58'07 17.88172 AU minimum elong -462 Sep 27 j 12:16 28° m 33'16 0°39'35 direct -454 Jul 16 i 04:18 0°M55'16 max. Earth dist. -462 Sep 26 i 22:58 28° m 31'11 19.47818 AU -462 Oct 20 i 20:23 0∘∙თ conjunction -454 Nov 02 j 17:19 5°M12'36 0°19'54 retrograde -461 Jan 12 j 12:34 2°**£**53'02 minimum elong -454 Nov 02 j 17:19 5°M12'36 0°19'55 -461 Mar 27 j 21:02 0°**£**51'54 0°43'11 max. Earth dist. -454 Nov 02 j 20:56 5°ML13'09 19.91498 AU opposition min. Earth dist. -461 Mar 28 j 07:35 0°**2**50'47 17.49973 AU retrograde -453 Feb 18 i 01:44 9°M26'01 -461 Apr 17 j 21:32 opposition -453 May 04 j 21:08 7°M25'39 0°20'23 30°R M direct -461 Jun 13 j 01:25 28° m/47'02 min. Earth dist. -453 May 04 j 15:30 7°ML26'14 17.94845 AU -461 Aug 05 j 18:21 -453 Jul 21 j 02:27 0∘**ত** direct 5°M23'33 -461 Oct 02 j 10:09 -453 Nov 07 j 07:54 3°**2**14'18 0°37'51 9°M39'21 0°16'47 conjunction conjunction -461 Oct 02 j 10:09 -453 Nov 07 j 07:54 9°M39'21 0°16'46 minimum elong 3°**2**14'18 0°37'51 minimum elong -461 Oct 01 j 23:10 -453 Nov 07 j 14:52 max. Earth dist. 3°**♀**12'35 19.52182 AU max. Earth dist. 9°M40'25 19.98268 AU -460 Jan 17 j 09:05 7°**₽**33'23 -452 Feb 22 j 17:46 retrograde 13°M51'58 retrograde -452 May 08 j 18:32 -460 Mar 31 j 22:55 5°**2**32'21 0°41'05 11°M51'46 0°16'52 opposition opposition -460 Apr 01 j 08:49 5°**2**31'18 17.54493 AU -452 May 08 j 11:10 11°ML52'31 18.01685 AU min. Earth dist. min. Earth dist. direct -460 Jun 17 j 02:45 3°**£**27'46 direct -452 Jul 24 j 23:19 9°M50'07 -460 Oct 06 j 07:08 conjunction 7°**2**53'48 0°35'51 conjunction -452 Nov 10 j 21:38 14°ML04'22 0°13'35 -460 Oct 06 j 07:08 minimum elong 7°**⊆**53'48 0°35'50 minimum elong -452 Nov 10 j 21:38 14°ML04'22 0°13'35 -460 Oct 05 j 21:21 max. Earth dist. 7°**£**52'16 19.56863 AU behind sun begin -452 Nov 10 j 17:54 14°ML03'49 retrograde -459 Jan 21 j 07:27 12°**♀**12'07 behind sun end -452 Nov 11 j 01:22 14°ML04'56 opposition -459 Apr 06 j 00:03 10°**△**11'10 0°38'43 max. Earth dist. -452 Nov 11 j 05:35 14°ML05'34 20.05173 AU min. Earth dist. -459 Apr 06 j 07:10 10°**£**10'25 17.59314 AU -452 Nov 26 j 03:29 15°M₁ -459 Jun 22 i 05:51 -451 Feb 26 i 10:20 direct 8°**£**06'51 retrograde 18°M16'11 -451 May 13 i 15:06 16°M16'08 0°13'15 opposition -459 Oct 11 i 03:20 12°**△**31'35 0°33'37 min. Earth dist. -451 May 13 i 05:42 conjunction 16°ML17'06 18.08637 AU -459 Oct 11 i 03:20 -451 Jun 16 i 01:45 minimum elong 12°**△**31'35 0°33'38 15°RM -459 Oct 10 i 20:20 max. Earth dist. 12°**2**30'30 19.61835 AU direct -451 Jul 29 i 19:04 14°ML14'56 -458 Jan 26 i 02:37 15°M retrograde 16°**♀**49'07 -451 Sep 09 j 21:42 opposition -458 Apr 11 j 01:05 14°**2**48'14 0°36'07 14°**2**47'35 17.64434 AU min. Earth dist. -458 Apr 11 j 07:16 conjunction -451 Nov 15 i 10:48 18°M27'40 0°10'20 -458 Jun 27 j 06:02 -451 Nov 15 i 10:47 direct 12°**-**44'14 minimum elong 18°M27'40 0°10'19 -451 Nov 15 j 05:34 behind sun begin 18°M26'53 -458 Oct 15 j 22:17 18° ML28'26conjunction 17°**2**07'33 0°31'12 behind sun end -451 Nov 15 j 16:01 -458 Oct 15 j 22:17 minimum elong 17°**₽**07'33 0°31'11 max. Earth dist. -451 Nov 15 j 21:42 18°M29'19 20.12141 AU -458 Oct 15 j 16:36 max. Earth dist. 17°**♀**06'40 19.67121 AU retrograde -450 Mar 03 j 01:43 22°M38'39 retrograde -457 Jan 30 j 23:59 21°**2**24'17 opposition -450 May 18 j 11:13 20°M38'47 0°09'36 -457 Apr 16 j 01:27 0°33'18 min. Earth dist. -450 May 18 j 00:03 20°M39'55 18.15600 AU opposition 19°**£**23'27 -457 Apr 16 j 04:35 direct -450 Aug 03 j 14:38 18°MJ38'02 min. Earth dist. 19°**£**23'07 17.69877 AU -457 Jul 02 j 07:40 direct 17°**2**19'45 -450 Nov 19 j 22:55 conjunction 22°M49'12 0°07'02 -457 Oct 20 j 16:30 conjunction 21°**△**41'37 0°28'36 minimum elong -450 Nov 19 j 22:55 22°M49'12 0°07'02 minimum elong -457 Oct 20 j 16:30 21°**△**41'37 0°28'36 behind sun begin -450 Nov 19 j 16:51 22°M48'18 max. Earth dist. -457 Oct 20 j 14:09 21°**2**41'15 19.72729 AU behind sun end -450 Nov 20 j 05:00 22°M50'06

retrograde

-456 Feb 04 j 18:03

25°**♀**57'31

max. Earth dist.

-450 Nov 20 j 10:40

22°M50'58 20.19088 AU

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•	Siliena of Ofanus T		•				C 31
	ical year style is used: T	-	n astronomicai coui		-443 Sep 03 j 02:10		
retrograde	-449 Mar 07 j 16:29	26°M59'25	0005154	direct	-443 Sep 03 J 02:10	18° ∡ ¹27'36	
opposition	-449 May 23 j 06:42	24°M59'40					
min. Earth dist.	-449 May 22 j 17:59		18.22524 AU	conjunction	-443 Dec 18 j 17:25	22° ∡ ¹28'41	0°-15'-39
direct	-449 Aug 08 j 07:59	22°M59'19		minimum elong	-443 Dec 18 j 17:25	22° ₹ 28'41	0°15'41
				behind sun begin	-443 Dec 18 j 15:37	22° ∡ ¹28'26	
conjunction	-449 Nov 24 j 10:39	27°M08'58	0°03'43	behind sun end	-443 Dec 18 j 19:12	22° ∡ ¹28'57	
minimum elong	-449 Nov 24 j 10:39	27° M 08'58	0°03'43	max. Earth dist.	-443 Dec 19 j 15:45	22° ∡ ³31'59	20.63134 AU
behind sun begin	-449 Nov 24 j 04:10	27°M08'01		retrograde	-442 Apr 06 j 08:44	26° ∡ ³33'38	
behind sun end	-449 Nov 24 j 17:07	27° M 09'55		min. Earth dist.	-442 Jun 22 j 01:54	24° ∡ ³36′29	18.65945 AU
max. Earth dist.	-449 Nov 25 j 00:56		20.25953 AU	opposition	-442 Jun 23 j 00:33	24° × 734'13	
max. Earth dist.	-448 Jan 15 i 05:09	0° √	20.23733 110	direct	-442 Sep 07 j 14:58	22°×35'58	0 10 50
	3			direct	-442 Sep 07 j 14.36	22 × 33 36	
retrograde	-448 Mar 11 j 06:59	1° ∡ 18'22			440 D 02:00 14	260 725150	00 101 26
	-448 May 09 j 18:41	30°RM₊		conjunction	-442 Dec 23 j 00:14	26° ₹ 35'50	
min. Earth dist.	-448 May 26 j 10:48		18.29316 AU	minimum elong	-442 Dec 23 j 00:14	26° ₹ 35'50	
opposition	-448 May 27 j 01:13	29° M 18'44	0°02'12	max. Earth dist.	-442 Dec 23 j 23:17	26° ∡ ³39'14	20.68690 AU
direct	-448 Aug 12 j 01:58	27° ™ 18'47			-441 Mar 01 j 07:53	0° ප	
	-448 Nov 03 j 09:23	0° ∡ ¹		retrograde	-441 Apr 10 j 18:36	0° る 40'13	
					-441 May 22 j 14:46	30°R. ✓	
conjunction	-448 Nov 27 j 21:28	1° ∡ ¹26'55	0°00'20	opposition	-441 Jun 27 j 13:53	28° ∡ ¹40'49	0°-22'-9
minimum elong	-448 Nov 27 j 21:29	1° ∡ 726'55		min. Earth dist.	-441 Jun 26 j 14:54		18.71427 AU
behind sun begin	-448 Nov 27 j 14:59	1° ₹ 25'58	0 00 17	direct	-441 Sep 12 j 01:05	26° × 42'51	10.71427710
•	-			direct			
behind sun end	-448 Nov 28 j 04:00	1° ₹ 27'52			-441 Dec 15 j 10:27	0°ಕ	
max. Earth dist.	-448 Nov 28 j 12:17		20.32658 AU				
desc. node	-447 Jan 02 j 06:55	3° ∡ ¹29'35		conjunction	-441 Dec 27 j 06:52	0° る 41'36	0°-21'-25
retrograde	-447 Mar 15 j 20:25	5° ∡ ³35'32		minimum elong	-441 Dec 27 j 06:52	0° る 41'36	0°21'27
opposition	-447 May 31 j 19:10	3° ∡ ³35'59	0°-1'-28	max. Earth dist.	-441 Dec 28 j 07:39	0° る 45'15	20.74074 AU
min. Earth dist.	-447 May 31 j 03:44	3° ∡ ³37'33	18.35935 AU	retrograde	-440 Apr 14 j 05:56	4° る 45'26	
direct	-447 Aug 16 j 17:23	1° ∡ ³36′22		min. Earth dist.	-440 Jun 30 j 01:19	2°₹48'37	18.76704 AU
				opposition	-440 Jul 01 j 02:09	2° る 46'07	
conjunction	-447 Dec 02 j 07:42	5° ∡ ¹43'01	0°-3'-3	direct	-440 Sep 15 j 12:14	0°る48'27	0 23 13
5	•			direct	-440 Sep 13 j 12.14	0 04627	
minimum elong	-447 Dec 02 j 07:41	5° ₹ 43'01	0°03'03				
behind sun begin	-447 Dec 02 j 01:11	5° ∡ ¹42'04		conjunction	-440 Dec 30 j 12:58	4° පි 46'10	
behind sun end	-447 Dec 02 j 14:12	5° ∡ 43'58		minimum elong	-440 Dec 30 j 12:58	4° る 46'10	
max. Earth dist.	-447 Dec 03 j 00:42	5° ∡ ¹45'34	20.39166 AU	max. Earth dist.	-440 Dec 31 j 14:12	4° る 49'51	20.79230 AU
retrograde	-446 Mar 20 j 09:45	9° ₰ 750'50		retrograde	-439 Apr 18 j 14:54	8° る 49'32	
opposition	-446 Jun 05 j 12:16	7° ∡ 751'21	0°-5'-7	opposition	-439 Jul 05 j 14:08	6° ⋜ 50′18	0°-28'-8
min. Earth dist.	-446 Jun 04 j 19:00	7° ∡ ¹53'06	18.42327 AU	min. Earth dist.	-439 Jul 04 j 13:26	6° る 52'47	18.81744 AU
direct	-446 Aug 21 i 09:40	5° ∡ ¹52'03		direct	-439 Sep 19 j 20:26	4° る 52'55	
		2 7. 2 2 03			.55 5 c p 15 j 20.20	. 30200	
conjunction	-446 Dec 06 j 17:06	9° × 757'13	00 6! 19	conjunction	-438 Jan 03 j 18:45	8° ⋜ 49'41	0°-26'-42
minimum elong	,			•	-438 Jan 03 j 18:45		
U	-446 Dec 06 j 17:06	9° × 757'13	0°06'20	minimum elong	,	8° る 49'41	0°26'44
behind sun begin	-446 Dec 06 j 10:55	9° ∡ 56'19 −		max. Earth dist.	-438 Jan 04 j 21:25		20.84130 AU
behind sun end	-446 Dec 06 j 23:17	9° ∡ 58'07		retrograde	-438 Apr 23 j 02:00	12° る 52'38	
max. Earth dist.	-446 Dec 07 j 10:38	9° ₹ 59'50	20.45450 AU	min. Earth dist.	-438 Jul 08 j 23:06		18.86487 AU
retrograde	-445 Mar 24 j 22:01	14° ₰ 04'17		opposition	-438 Jul 10 j 01:26	10° る 53'30	0°-30'-54
min. Earth dist.	-445 Jun 09 j 10:39	12° ∡ ¹06'38	18.48517 AU	direct	-438 Sep 24 j 06:37	8° る 56'24	
opposition	-445 Jun 10 j 04:38	12° ₹ '04'49	0°-8'-43				
direct	-445 Aug 25 j 23:35	10° ∡ ¹05'46		conjunction	-437 Jan 08 j 00:20	12° る 52'18	0°-29'-8
				minimum elong	-437 Jan 08 j 00:20	12° る 52'18	0°29'09
conjunction	-445 Dec 11 j 01:51	14° ₹ 09'31	0°-9'-30	max. Earth dist.	-437 Jan 09 j 03:10		20.88700 AU
minimum elong	-445 Dec 11 j 01:51	14° × '09'31	0°09'31		-437 Apr 27 j 10:39	12 33 6 12 16° る 54'54	20.00700 AU
Č	,		0-09-31	retrograde			10 00000 177
behind sun begin	-445 Dec 10 j 20:23	14° ₹ 08'44		min. Earth dist.	-437 Jul 13 j 10:33		18.90889 AU
behind sun end	-445 Dec 11 j 07:19	14° ∤ 10'19		opposition	-437 Jul 14 j 12:15	14° る 55'51	0°-33'-30
max. Earth dist.	-445 Dec 11 j 21:31	14° ⊀ 12'27	20.51532 AU	direct	-437 Sep 28 j 13:16	12° る 59'01	
retrograde	-444 Mar 28 j 10:17	18° ∡ 15'50					
opposition	-444 Jun 13 j 20:02	16° ∡ 16′22	0°-12'-14	conjunction	-436 Jan 12 j 05:52	16° පි 54'08	0°-31'-25
min. Earth dist.	-444 Jun 13 j 00:05	16° ∡ 18'23	18.54494 AU	minimum elong	-436 Jan 12 j 05:52	16° る 54'08	0°31'27
direct	-444 Aug 29 j 14:04	14° √ 17'36	-	max. Earth dist.	-436 Jan 13 j 09:33		20.92903 AU
	2. J 11.04			retrograde	-436 Apr 30 j 20:58	20°る56'25	
aaniumatiam	444 Dag 14: 00:50	100.710150	00 121 27	-	1 3	20 3 36 23	00 25! 56
conjunction	-444 Dec 14 j 09:52	18° ₹ 19'58	0°-12'-37	opposition	-436 Jul 17 j 22:24		
minimum elong	-444 Dec 14 j 09:52	18° √ 19'58 −	0°12'39	min. Earth dist.	-436 Jul 16 j 19:33		18.94874 AU
behind sun begin	-444 Dec 14 j 05:37	18° ≯ 19'21		direct	-436 Oct 01 j 22:53	17° る 00'51	
behind sun end	-444 Dec 14 j 14:07	18° ≯ 20'35					
max. Earth dist.	-444 Dec 15 j 06:10	18° ∡ ¹22'59	20.57411 AU	conjunction	-435 Jan 15 j 11:08	20° පි 55'16	0°-33'-33
retrograde	-443 Apr 01 j 21:08	22° ₹ 25'35		minimum elong	-435 Jan 15 j 11:08	20° ප 55'16	0°33'34
opposition			00 151 20	E d E d		200750114	20.06646.477
	-443 Jun 18 j 10:40	20° ∡ °26′07	0°-15'-39	max. Earth dist.	-435 Jan 16 j 14:31	20° 5 59'14	20.96646 AU
min. Earth dist.	-443 Jun 18 j 10:40 -443 Jun 17 j 14:10		0°-15'-39 18.60302 AU	max. Earth dist.	-435 Jan 16 j 14:31 -435 May 05 j 05:33	20°559'14 24° 5 57'18	20.96646 AU

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -435 in astronomical counting style is the year 436 BCE in historical counting style. 23°る00'56 18.98386 AU min. Earth dist. -435 Jul 21 i 06:28 minimum elong -427 Feb 16 i 04:36 22°**≈**43'41 0°43'52 22°**≈**47'16 21.08811 AU -435 Jul 22 i 08:14 22°る58'22 0°-38'-11 max. Earth dist. -427 Feb 17 j 05:44 opposition direct -435 Oct 06 j 04:46 21°る01'57 -427 Jun 06 j 20:26 26°≈45'05 retrograde -427 Aug 23 j 22:43 0°-48'-41 opposition 24°≈45'39 24°≈47'55 19.08727 AU -434 Jan 19 j 16:30 24°る55'45 0°-35'-30 min. Earth dist. -427 Aug 23 j 00:07 conjunction -434 Jan 19 j 16:30 24°る55'45 0°35'31 -427 Nov 07 j 04:10 minimum elong direct 22°≈49'25 -434 Jan 20 j 20:14 24°る59'45 20.99906 AU max. Earth dist. -434 May 09 j 14:56 -426 Feb 20 j 10:22 26°≈41'02 0°-44'-14 retrograde 28°る57'33 conjunction 0°44'16 -434 Jul 26 j 17:31 -426 Feb 20 j 10:22 opposition 26°**る**58'38 0°-40'-15 minimum elong 26°≈41'02 -434 Jul 25 j 14:53 -426 Feb 21 j 11:14 min. Earth dist. 27°る01'18 19.01378 AU max. Earth dist. 26°≈44'35 21.08456 AU -434 Oct 10 j 13:33 direct 25°**る**02'22 -426 Apr 29 j 17:34 0°**∀** -426 Jun 11 j 05:51 0°**)** 42'36 retrograde -433 Jan 23 j 21:39 28°る55'36 0°-37'-17 -426 Jul 24 j 15:02 conjunction 30°R≈ -433 Jan 23 j 21:39 minimum elong 28°る55'36 0°37'18 min. Earth dist. -426 Aug 27 j 06:14 28°≈45'25 19.08179 AU max. Earth dist. -433 Jan 25 j 00:44 28°る59'29 21.02620 AU opposition -426 Aug 28 j 05:06 28°≈43'07 0°-49'00 -433 Feb 11 j 18:10 0°≈ direct -426 Nov 11 j 09:33 26°≈46'51 retrograde -433 May 13 j 23:06 2°≈57'12 -425 Feb 13 j 08:04 0°**)**€ min. Earth dist. -433 Jul 30 j 01:14 1°≈00'47 19.03825 AU opposition -433 Jul 31 j 02:30 0°**≈**58'15 0°-42'-6 conjunction -425 Feb 24 j 16:22 0°\(\mathbf{3}8'39\) 0°-44'-25 -433 Aug 25 j 13:03 30°Ŗる minimum elong -425 Feb 24 j 16:22 0°**)** 38'39 0°44'26 direct -433 Oct 14 j 19:15 29°る02'04 max. Earth dist. -425 Feb 25 j 16:10 0°**)** 42′02 21.07710 AU -433 Dec 02 i 01:00 0°≈ retrograde -425 Jun 15 j 12:36 4°**)** 40′27 opposition -425 Sep 01 j 11:35 2°\(\)\(40'56\) 0°-49'-4 conjunction -432 Jan 28 i 02:55 2°**≈**54'49 0°-38'-52 min. Earth dist. -425 Aug 31 i 14:37 2°**)** 43'03 19.07233 AU minimum elong -432 Jan 28 i 02:55 2°**≈**54'49 0°38'53 direct -425 Nov 15 j 12:56 0°**)**(44'38 max. Earth dist. -432 Jan 29 i 06:02 2°≈58'42 21.04801 AU retrograde -432 May 17 j 07:35 6°≈56'14 conjunction -424 Feb 28 j 22:55 4° **★** 36'41 0°-44'-23 min. Earth dist. -432 Aug 02 j 08:46 4°≈59'49 19.05735 AU minimum elong -424 Feb 28 j 22:55 4°**₩**36'41 0°44'25 -432 Aug 03 j 10:39 4°≈57'14 0°-43'-45 max. Earth dist. -424 Feb 29 j 21:59 4°**)** 39'58 21.06567 AU opposition -432 Oct 18 j 02:40 -424 Jun 18 j 22:28 direct 3°≈01'05 retrograde 8°**)** 38'48 -424 Sep 04 j 17:45 opposition 6°**)** 39'15 0°-48'-55 -431 Jan 31 j 07:56 6°≈53'24 0°-40'-16 min. Earth dist. -424 Sep 03 j 20:55 6°**)**41'22 19.05868 AU conjunction -431 Jan 31 j 07:56 -424 Nov 18 j 18:18 4°**)** 42′54 minimum elong 6°≈53'24 0°40'18 direct max. Earth dist. -431 Feb 01 j 10:23 6°≈57'12 21.06455 AU -431 May 21 j 14:38 -423 Mar 04 j 05:50 8°\;\;35'20 0°-44'-8 retrograde 10°≈54'43 conjunction -423 Mar 04 j 05:50 -431 Aug 07 j 18:41 8°≈55'37 0°-45'-11 8°\(\frac{1}{35}\)'20 0°44'09 opposition minimum elong -423 Mar 05 j 03:28 -431 Aug 06 j 18:12 8°**升**38'25 21.04977 AU min. Earth dist. 8°≈58'04 19.07156 AU max. Earth dist. direct -431 Oct 22 j 08:01 6°≈59'29 retrograde -423 Jun 23 j 06:03 12°**)** 37'49 -423 Sep 08 j 05:37 min. Earth dist. 10°**)**40′07 19.04046 AU -430 Feb 04 j 12:54 conjunction 10°≈51'27 0°-41'-28 opposition -423 Sep 09 j 00:13 10°**)** 38'14 0°-48'-32 minimum elong -430 Feb 04 j 12:54 10°≈51'27 0°41'29 direct -423 Nov 22 j 21:52 8°**)**41'48 max. Earth dist. -430 Feb 05 j 15:32 10°≈55'16 21.07654 AU retrograde -430 May 25 j 23:02 14°≈52'42 conjunction -422 Mar 08 j 13:17 12°**)** 34'41 0°-43'-41 min. Earth dist. -430 Aug 11 j 00:58 12°≈56'01 19.08136 AU minimum elong -422 Mar 08 j 13:18 12°**)** 34'41 0°43'42 -430 Aug 12 j 02:08 12°**≈**53'30 0°-46'-24 max. Earth dist. -422 Mar 09 j 09:47 12°**₭**37'36 21.02921 AU opposition -430 Oct 26 i 14:26 -422 Jun 27 i 16:26 16°**)**€37'35 direct 10°≈57'20 retrograde -422 Sep 13 i 06:37 14°**)** 37'57 0°-47'-55 opposition -429 Feb 08 i 18:00 14°≈49'05 0°-42'-28 14°**¥**39'47 19.01726 AU conjunction min. Earth dist. -422 Sep 12 j 12:31 -429 Feb 08 i 18:00 -422 Nov 27 j 03:45 minimum elong 14°≈49'05 0°42'29 direct 12°**)**(41'24 -429 Feb 09 i 20:00 max. Earth dist. 14°≈52'47 21.08421 AU -429 Feb 11 i 22:26 15°≈ conjunction -421 Mar 12 j 21:26 16°**¥**34'50 0°-43'00 retrograde -429 May 30 i 05:27 18°≈50'18 minimum elong -421 Mar 12 i 21:26 16°**¥**34'50 0°43'01 min. Earth dist. -429 Aug 15 j 09:36 16°≈53'23 19.08713 AU max. Earth dist. -421 Mar 13 j 16:00 16°**)** 37′29 21.00329 AU -429 Aug 16 j 09:15 -421 Jul 02 j 00:42 20°**)** 38'11 opposition 16°≈51'01 0°-47'-23 retrograde -429 Oct 16 j 12:02 -421 Sep 17 j 13:08 15°R≈ opposition 18°**)** 38′28 0°-47'-3 -429 Oct 30 j 18:49 direct 14°≈54'50 min. Earth dist. -421 Sep 16 j 21:36 18°**)** 40′03 18.98862 AU -429 Nov 13 j 22:04 15°≈ direct -421 Dec 01 j 07:45 16°**)** 41′46

-428 Feb 12 j 23:20

-428 Feb 12 j 23:20

-428 Feb 14 j 01:15

-428 Jun 02 j 14:14

-428 Aug 19 j 16:00

-428 Aug 18 j 15:49

-428 Nov 03 j 00:34

-427 Feb 16 j 04:36

conjunction

retrograde

opposition

conjunction

direct

minimum elong

max. Earth dist.

min. Earth dist.

18°≈46'26 0°-43'-16

22°≈43'41 0°-43'-51

18°≈50'08 21.08810 AU

18°≈46'26

22°≈47'42

20°≈48'20

20°≈50'46

18°≈52'07

0°43'17

0°-48'-9

19.08908 AU

conjunction

retrograde

opposition

conjunction

direct

minimum elong

max. Earth dist.

min. Earth dist.

-420 Mar 16 j 06:10

-420 Mar 16 j 06:10

-420 Mar 16 j 23:03

-420 Jul 05 j 11:22

-420 Sep 20 j 19:43

-420 Sep 20 j 04:55

-420 Dec 04 j 14:19

20°\(\frac{1}{35}\)'49 0°-42'-7

20°**₭**38'13 20.97205 AU

22°\dagger41'18 18.95460 AU

0°42'07

0°-45'-57

20°**)** ₹35'49

24°**)** 39'38

22°**)** 39'48

20°**)** 42'53

-419 Mar 20 j 15:12 24° ¥ 37'36 0°-41'00

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, Attention, astronomical year style is used: The year -419 in astronomical counting style is the year 420 BCE in historical counting style. -419 Mar 20 j 15:12 24°\(\dagger)37'36\) 0°41'02 minimum elong minimum elong -411 Apr 23 i 15:51 27°Υ30'56 0°25'09 24°**)** 39'44 20.93540 AU max. Earth dist. -419 Mar 21 i 06:10 max. Earth dist. -411 Apr 23 j 16:34 27°**Υ**31'02 20.51793 AU -419 Jul 09 j 19:56 28°\dagger41'56 -411 Jun 08 j 07:13 0°8 retrograde -419 Sep 25 j 02:34 26°\(\frac{1}{41}\)'57 0°-44'-37 -411 Aug 12 j 18:39 1°840'44 opposition retrograde -419 Sep 24 j 14:19 -411 Oct 19 j 14:07 30°R℃ min. Earth dist. 26°**)** 43'13 18.91542 AU 29°**Y**39'35 0°-26'-20 -419 Dec 08 j 18:54 24°\ 44'48 -411 Oct 27 j 17:06 direct opposition 29°**Ƴ**39'32 18.48731 AU min. Earth dist. -411 Oct 27 j 17:34 27°**Y**39'56 -418 Mar 25 j 01:00 28°\double 40'16 0°-39'-42 -410 Jan 10 j 05:38 conjunction direct 28°**)** 40'16 0°39'42 -418 Mar 25 j 01:00 -410 Mar 28 j 13:49 minimum elong 0° 8 -418 Mar 25 j 14:14 max. Earth dist. 28°\(\pm\)42'09 20.89405 AU -418 Apr 17 j 16:30 $0^{\circ}\Upsilon$ conjunction -410 Apr 28 j 07:33 1°**8**44'20 0°-22'-24 2° Y 45 ' 08 -418 Jul 14 j 07:12 -410 Apr 28 j 07:33 retrograde minimum elong 1°**8**44'20 0°22'25 -418 Sep 29 j 09:17 0°**Y**44'59 -410 Apr 28 j 05:42 1°844'04 20.45664 AU opposition 0°-43'-4 max. Earth dist. -418 Sep 28 j 21:51 -410 Aug 17 j 09:28 min. Earth dist. 0°**Υ**46'09 18.87182 AU retrograde 5°**8**54'58 -418 Oct 18 j 01:57 30°**₹** opposition -410 Nov 01 j 02:47 3°**8**53'44 0°-23'-12 direct -418 Dec 13 j 01:58 28°\ 47'31 min. Earth dist. -410 Nov 01 j 04:35 3°853'33 18.42514 AU -417 Feb 05 j 02:47 $0^{\circ}\Upsilon$ direct -409 Jan 14 j 16:05 1°**8**53'45 conjunction -417 Mar 29 j 11:22 2°**Y**'43'50 0°-38'-10 conjunction -409 May 03 j 00:23 5°**8**59'36 0°-19'-30 minimum elong -417 Mar 29 j 11:22 2°**Y**43'50 0°38'12 minimum elong -409 May 03 j 00:23 5°**8**59'36 0°19'31 max. Earth dist. -417 Mar 29 j 22:45 2°Υ45'28 20.84840 AU max. Earth dist. -409 May 02 j 20:50 5°859'06 20.39347 AU retrograde -417 Jul 18 i 16:27 6°**Y**49'17 retrograde -409 Aug 21 i 23:54 10°**8**11'04 opposition -417 Oct 03 i 16:21 4°**Υ**48'57 0°-41'-17 opposition -409 Nov 05 i 13:18 8°809'46 0°-19'-55 min. Earth dist. -417 Oct 03 i 07:25 4°**Υ**49'53 18.82427 AU min. Earth dist. -409 Nov 05 i 17:32 8°809'19 18.36100 AU direct -417 Dec 17 j 07:13 2°Y51'11 direct -408 Jan 19 j 02:27 6°809'27 -416 Apr 01 j 22:17 6°Y48'25 0°-36'-28 conjunction -408 May 06 j 17:51 10°816'46 0°-16'-28 conjunction minimum elong -416 Apr 01 j 22:18 6°**Y**48'25 0°36'28 minimum elong -408 May 06 j 17:51 10°816'46 0°16'29 max. Earth dist. -416 Apr 02 j 07:53 6°**Y**49'47 20.79925 AU max. Earth dist. -408 May 06 j 11:16 10°**8**15'49 20.32842 AU -416 Jul 22 j 04:18 10°**Y**54'29 -408 Aug 25 j 15:43 retrograde retrograde 14°**8**29'06 -416 Oct 06 j 23:28 0°-39'-17 -408 Nov 09 j 00:23 8°**Y**53'59 opposition 12°**8**27'40 0°-16'-30 opposition -416 Oct 06 j 15:18 8°**Υ**54'49 18.77353 AU -408 Nov 09 j 06:09 min. Earth dist. min. Earth dist. 12°**8**27'04 18.29499 AU -416 Dec 20 j 14:36 -407 Jan 22 j 15:12 6°Y55'54 10°**8**26'58 direct direct -415 Apr 06 j 09:52 10°Υ′54'07 0°-34'-33 -407 May 11 j 12:26 14°**8**35'48 0°-13'-20 conjunction conjunction -415 Apr 06 j 09:52 -407 May 11 j 12:26 10°Υ′54'07 0°34'34 14°**8**35'48 0°13'21 minimum elong minimum elong -415 Apr 06 j 17:48 10°**Y**55'16 20.74707 AU -407 May 11 j 08:43 14°**8**35'16 max. Earth dist. behind sun begin -407 May 11 j 16:09 retrograde -415 Jul 26 j 14:56 15°**Y**00′51 behind sun end 14°**8**36'20 opposition -415 Oct 11 j 07:01 13°**Υ**'00'11 0°-37'-5 max. Earth dist. -407 May 11 j 04:17 14°**8**34'36 20.26137 AU min. Earth dist. -415 Oct 11 j 01:11 13°**Y**00'48 18.72009 AU -407 May 18 j 08:54 15°8 direct -415 Dec 24 j 20:45 11° **Y**01'47 retrograde -407 Aug 30 j 06:56 18°**8**48'56 opposition -407 Nov 13 j 12:08 16°847'24 0°-12'-57 -414 Apr 10 j 22:09 15°**Υ**'01'05 0°-32'-28 min. Earth dist. -407 Nov 13 j 20:11 16°**8**46'33 18.22707 AU conjunction minimum elong -414 Apr 10 j 22:09 15°Υ01'05 0°32'28 -406 Jan 04 j 06:15 15°₹8 max. Earth dist. -414 Apr 11 j 04:09 15°**Υ**01'57 20.69260 AU direct -406 Jan 27 j 03:08 14°**8**46'17 -414 Jul 31 i 03:39 19° Y 08'32 -406 Feb 18 i 23:04 retrograde 15°8 -414 Oct 15 i 14:50 17°**Υ**07'42 0°-34'-40 opposition -414 Oct 15 i 09:49 17°**Y**08'14 18.66450 AU -406 May 16 i 07:46 18°**8**56'37 0°-10'-6 min. Earth dist. conjunction -414 Dec 29 i 04:36 15°**Y**08'58 -406 May 16 i 07:46 18°**8**56'37 direct minimum elong 0°10'06 behind sun begin -406 May 16 i 02:23 18°**8**55'51 19°**Υ**′09'27 0°-30'-12 conjunction -413 Apr 15 j 11:18 behind sun end -406 May 16 i 13:08 18°**8**57'24 minimum elong -413 Apr 15 j 11:18 19°**Y**′09′27 0°30'12 max. Earth dist. -406 May 15 j 20:20 18°854'56 20.19280 AU max. Earth dist. -413 Apr 15 j 15:40 19°Υ10'05 20.63597 AU retrograde -406 Sep 03 j 23:57 23°810'36 -413 Aug 04 j 15:38 23°Y17'38 -406 Nov 18 i 00:30 21°808'54 0°-9'-19 retrograde opposition -413 Oct 19 j 23:03 21°**Υ**16'41 opposition 0°-32'-4 min. Earth dist. -406 Nov 18 j 10:14 21°807'51 18.15788 AU -413 Oct 19 j 20:20 -405 Jan 31 j 17:55 min. Earth dist. 21°**Υ**16'58 18.60696 AU direct 19°**8**07'20 direct -412 Jan 02 j 11:59 19°**Y**17'38 -405 May 21 j 04:03 23°819'13 0°-6'-47 conjunction -412 Apr 19 j 01:11 23°**Y**19'21 0°-27'-45 minimum elong -405 May 21 j 04:03 23°**8**19'13 0°06'48 conjunction -412 Apr 19 j 01:11 23°**Y**19′21 0°27'46 behind sun begin -405 May 20 j 21:45 23°**8**18'18 minimum elong -412 Apr 19 j 03:22 23°**Υ**19'40 -405 May 21 j 10:21 23°**8**20'07 max. Earth dist. 20.57776 AU behind sun end -412 Aug 08 j 05:25 retrograde 27°**Y**28′19 max. Earth dist. -405 May 20 j 15:23 23°**8**17'21 20.12306 AU -412 Oct 23 j 07:46 opposition 25°**Y**27'16 0°-29'-17 retrograde -405 Sep 08 j 16:03 27°**8**33'58 min. Earth dist. -412 Oct 23 j 05:57 25°**Y**27'27 18.54794 AU opposition -405 Nov 22 j 13:29 25°**8**32'08 0°-5'-35 direct -411 Jan 05 j 20:45 23°**Y**27′54 min. Earth dist. -405 Nov 23 j 01:08 25°**8**30'53 18.08786 AU

direct

max. Earth dist.

-411 Apr 23 j 15:50

conjunction

27°**Υ**'30'56 0°-25'-9

-404 Feb 05 j 07:50

-404 May 24 j 09:07

23°830'08

27°841'12 20.05309 AU

Planetary Phenomena of Uranus from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:47, page 34

Attention, astronomical year style is used: The year -404 in astronomical counting style is the year 405 BCE in historical counting style.

Attention, astronomi			•	
conjunction	-404 May 2	25 j 00:54	27° 8 43'32	0°-3'-25
minimum elong	-404 May 2	25 j 00:53	27° 8 43'32	0°03'25
behind sun begin	-404 May 2	24 j 18:09	27° 8 42'33	
behind sun end	-404 May 2	25 j 07:37	27° 8 44'31	
	-404 Jul (04 j 03:09	$\Pi^{\circ}0$	
retrograde	-404 Sep 1	12 i 09:50	1° Ⅱ 59'06	
S	-404 Nov 2		30° ₹	
opposition	-404 Nov 2		29° 8 57'06	0°-1'-49
min. Earth dist.	-404 Nov 2		29° 8 55'40	18.01812 AU
direct	-403 Feb (-	27° 8 54'38	
ancer	-403 Apr 2		0°II	
asc. node	-403 May 2		1° Ⅱ 42'45	
use. Hode	403 May 2	22 j 10.33	1 11 12 13	
conjunction	-403 May 2	29 i 22:30	2° Ⅱ 09'35	0°00'05
minimum elong	-403 May 2		2° Ⅱ 09'35	0°00'05
behind sun begin	-403 May 2	-	2° Ⅱ 08'39	
behind sun end	-403 May 3	-	2° I 10'31	
max. Earth dist.	-403 May 2	-	2° I 107'08	19.98360 AU
retrograde	-403 Sep 1	-	6° Ⅱ 25'55	17.70300 710
opposition	-403 Nov 3		4° Ⅱ 23'47	0°01'59
min. Earth dist.	-403 Dec 0		4° I I22'12	17.94913 AU
direct	-403 Dec 6	-	2° I I20'52	17.94913 AU
direct	-402 FC0 1	13 J 13.34	2 1120 32	
conjunction	-402 Jun (03 i 20·53	6° Ⅱ 37'22	0°03'35
minimum elong		03 j 20:54	6° П 37'22	0°03'35
behind sun begin		03 j 14:10	6° Ⅱ 36'23	0 03 33
behind sun end	-402 Jun (6° I 38'21	
max. Earth dist.	-402 Jun (6° Ⅱ 34'28	19.91536 AU
		-	10° I I54'28	19.91550 AU
retrograde	-402 Sep 2	-	10 П 34 28 8° П 52'12	0905140
opposition min. Earth dist.	-402 Dec 0		8° П 52′12 8° П 50′26	0°05'49 17.88190 AU
	-402 Dec 0			17.88190 AU
direct	-401 Feb 1	18 J 09:08	6° Ⅱ 48'50	
conjunction	-401 Jun (08 j 20:07	11° II 06'53	0°07'00
minimum elong		08 j 20:07	11° I I06'53	0°07'01
behind sun begin		08 j 20:07 08 j 13:52	11° I I00'53	0 07 01
behind sun end		09 j 02:23	11° I 103'38	
max. Earth dist.		08 j 00:26	11° I I07' 4 5	19.84911 AU
retrograde		26 j 17:25	11 I I 03 30 15° I I 24'44	19.04911 AU
0	-	3		0°09'37
opposition	-401 Dec 1		13° Ⅱ 22'22	
min. Earth dist.	-401 Dec 1		13° II 20'30	17.81693 AU
direct	-400 Feb 2	23 J 03:07	11° Ⅱ 18'37	
conjunction	-400 Jun 1	12 j 19:39	15° Ⅱ 38'11	0°10'24
minimum elong		12 j 19:39	15° I 38'11	0°10'24
behind sun begin		12 j 14:23	15° I 37'24	0 102.
behind sun end		13 j 00:55	15° II 38'57	
max. Earth dist.		11 j 21:31	15° II 34'50	19.78555 AU
retrograde	-400 Juli 1		19° I I56'46	17.10333 AU
opposition	-400 Sep 3	-	19 Ⅱ 56 46 17° Ⅱ 54'20	0012124
min. Earth dist.	-400 Dec 1		17° Ⅲ 54′20 17° Ⅱ 52'19	0°13'24
mm. Earth tist.	-400 Dec 1	14 J 11.20	1/ 11/3/2 19	17.75508 AU

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -400 Feb 23 i 03:07 direct 11°**Ⅱ**18'37 conjunction -393 Jul 17 i 11:07 18°906'53 0°31'47 -393 Jul 17 j 11:07 18°906'53 0°31'47 minimum elong conjunction -400 Jun 12 j 19:39 15°**Ⅲ**38'11 0°10'24 -393 Nov 03 j 02:17 22°529'28 retrograde -400 Jun 12 j 19:39 15°**耳**38'11 0°10'24 -392 Jan 15 j 10:39 minimum elong 20°9527'08 0°36'46 opposition -400 Jun 12 j 14:23 -392 Jan 16 j 10:26 behind sun begin 15°**Ⅲ**37'24 20°524'32 17.42058 AU min. Earth dist. -400 Jun 13 j 00:55 15°**Ⅲ**38'57 behind sun end direct -392 Mar 31 j 06:08 18°921'14 -400 Jun 11 j 21:31 15°**I**34'50 19.78555 AU -392 Jul 20 j 10:05 max. Earth dist. max. Earth dist. 22°546'35 19.40286 AU -400 Sep 30 j 12:53 retrograde 19°**Ⅲ**56'46 -400 Dec 13 j 16:48 opposition 17°**I**54'20 0°13'24 conjunction -392 Jul 21 j 14:50 22°**©**51'03 0°34'12 -392 Jul 21 j 14:50 min. Earth dist. -400 Dec 14 j 11:26 17°**I**52'19 17.75508 AU minimum elong 22°951'03 0°34'12 -399 Feb 26 j 21:22 -392 Nov 07 j 00:41 direct 15°**Ⅲ**50′12 retrograde 27°9513'55 -391 Jan 19 j 09:24 opposition 25°511'35 0°39'21 -399 Jun 17 j 20:10 20°**Ⅱ**11'17 0°13'45 -391 Jan 20 j 10:34 conjunction min. Earth dist. 25°508'50 17.38708 AU -399 Jun 17 j 20:11 minimum elong 20°**Ⅱ**11'17 0°13'46 direct -391 Apr 05 j 07:18 23°905'28 behind sun begin -399 Jun 17 j 16:46 20°**Ⅱ**10'47 behind sun end -399 Jun 17 j 23:35 20°**Ⅱ**11'48 conjunction -391 Jul 26 j 18:45 27°936'05 0°36'24 max. Earth dist. -399 Jun 16 j 21:57 20°**Ⅲ**07'55 19.72533 AU minimum elong -391 Jul 26 j 18:45 27°936'05 0°36'24 retrograde -399 Oct 05 j 10:25 24°**Ⅲ**30'35 max. Earth dist. -391 Jul 25 j 13:15 27°531'29 19.37153 AU opposition -399 Dec 18 j 09:59 22°**II**28'07 0°17'07 -391 Sep 05 j 04:03 $0^{\circ}\Omega$ min. Earth dist. -399 Dec 19 j 05:04 22°**II**26'03 17.69662 AU retrograde -391 Nov 12 j 00:44 1° € 59'09 direct -398 Mar 03 j 16:52 20°**Ⅲ**23'41 -390 Jan 23 j 03:07 30°R55 opposition -390 Jan 24 i 08:25 29°556'48 0°41'40 conjunction -398 Jun 22 j 21:16 24°**II**46'15 0°17'03 min. Earth dist. -390 Jan 25 i 08:51 29°554'08 17.35798 AU minimum elong -398 Jun 22 j 21:16 24°**Ⅱ**46′15 0°17'03 direct -390 Apr 10 j 10:30 27°950'29 max. Earth dist. -398 Jun 21 j 20:52 24°**Ⅱ**42'32 19.66868 AU -390 Jun 22 j 07:42 $0^{\circ}\Omega$ retrograde -398 Oct 10 j 07:19 29°**Ⅱ**06'14 -398 Dec 23 i 04:08 27°**I**103'47 0°20'45 -390 Jul 31 j 22:48 2°Ω21'46 0°38'20 opposition conjunction -398 Dec 24 j 00:50 27°**Ⅱ**01'31 17.64192 AU -390 Jul 31 j 22:48 2°Ω21'46 0°38'20 min. Earth dist. minimum elong -397 Mar 08 j 12:18 24°**I**I59'02 max. Earth dist. -390 Jul 30 j 18:02 2°**Ω**17'16 19.34473 AU direct -390 Nov 16 j 23:40 6°**Ω**44'57 retrograde -389 Jan 29 j 08:17 -397 Jun 27 j 23:01 29°II23'03 0°20'16 4°Ω42'36 0°43'43 conjunction opposition -389 Jan 30 j 09:34 -397 Jun 27 j 23:01 29°II23'03 0°20'16 4°**Ω**39'50 17.33374 AU minimum elong min. Earth dist. -397 Jun 26 j 22:29 -389 Apr 15 j 12:39 max. Earth dist. 29°**Ⅱ**19'18 19.61575 AU direct $2^{\circ}\Omega .36'07$ -397 Jul 08 j 00:33 max. Earth dist. -389 Aug 04 j 21:12 7°**Ω**03'18 19.32319 AU 0.00 -397 Oct 15 j 06:22 3°5543'41 retrograde -397 Dec 27 j 23:01 1°5541'16 0°24'16 -389 Aug 06 j 02:25 7°**Ω**07'53 0°40'02 opposition conjunction 1°539'00 17.59077 AU -397 Dec 28 j 19:51 -389 Aug 06 j 02:24 7°**Ω**07'53 0°40'02 min. Earth dist. minimum elong -396 Feb 11 j 04:22 30°R∏ retrograde -389 Nov 22 j 00:21 11°**Ω**31'09 direct -396 Mar 12 j 09:13 29°**Ⅲ**36'18 opposition -388 Feb 03 j 08:27 9°**Ω**28'46 0°45'27 -396 Apr 11 j 07:47 0ಂತಾ min. Earth dist. -388 Feb 04 j 08:33 9°**Ω**26'08 17.31502 AU max. Earth dist. -396 Jun 30 j 23:03 3°557'39 19.56633 AU direct -388 Apr 19 j 16:39 $7^{\circ}\Omega 22'08$ max. Earth dist. -388 Aug 09 j 02:36 11°**Ω**49'58 19.30734 AU -396 Jul 02 j 01:17 4°501'41 0°23'22 conjunction -396 Jul 02 j 01:17 4°501'41 0°23'23 -388 Aug 10 j 06:05 11°Ω54'17 0°41'26 minimum elong conjunction -396 Oct 19 j 04:23 8°9522'55 -388 Aug 10 j 06:05 11°**Ω**54'17 0°41'26 retrograde minimum elong -396 Dec 31 i 18:46 -388 Oct 03 i 10:39 opposition 6°520'32 0°27'40 15°Ω -395 Jan 01 j 17:22 -388 Nov 25 i 23:39 min. Earth dist. 6°5518'04 17.54324 AU retrograde 16°Ω17'31 -387 Jan 20 j 20:00 direct -395 Mar 17 j 06:18 4°9515'18 15°RΩ -387 Feb 07 i 09:04 max. Earth dist. -395 Jul 06 j 01:25 8°537'52 19.52043 AU opposition 14°Ω15'10 0°46'52 min. Earth dist. -387 Feb 08 i 09:19 14° Ω12'31 17.30226 AU -395 Jul 07 i 04:08 8°9341'59 0°26'20 direct -387 Apr 24 j 18:59 12°Ω08'26 conjunction -395 Jul 07 i 04:08 8°9341'59 0°26'20 -387 Jul 19 j 02:10 15°Ω minimum elong -395 Oct 24 j 04:07 13°903'44 max. Earth dist. -387 Aug 14 j 05:42 16°Ω36'28 19.29781 AU retrograde -394 Jan 05 i 15:17 opposition 11°901'24 0°30'54 -394 Jan 06 j 13:49 min. Earth dist. 10°558'56 17.49894 AU conjunction -387 Aug 15 j 09:23 16° **Ω** 40′50 0°42′34 direct -394 Mar 22 j 05:25 8°955'57 minimum elong -387 Aug 15 j 09:23 16°**Ω**40'50 0°42'33 max. Earth dist. -394 Jul 11 j 03:35 13°519'29 19.47766 AU retrograde -387 Dec 01 j 00:37 21°**Q**04'00 -386 Feb 12 j 10:04 19°**Ω**01'40 0°47'58 opposition -394 Jul 12 j 07:29 13°9523'48 0°29'09 -386 Feb 13 j 08:57 18°**Ω**59'10 17.29603 AU conjunction min. Earth dist. -394 Jul 12 j 07:29 13°**5**23'48 -386 Apr 29 j 22:54 16°**Ω**54'55 minimum elong 0°29'10 direct -394 Oct 29 j 02:17 -386 Aug 19 j 11:10 21°**Ω**23'25 19.29485 AU retrograde 17°5946'00 max. Earth dist. -393 Jan 10 j 12:39 opposition 15°5643'40 0°33'56 min. Earth dist. -393 Jan 11 j 12:54 15°9541'01 17.45799 AU conjunction -386 Aug 20 j 12:31 21°**Ω**27'25 0°43'23 minimum elong direct -393 Mar 27 j 04:34 13°937'59 -386 Aug 20 j 12:31 21°**Ω**27'25 0°43'24 max. Earth dist. -393 Jul 16 j 06:33 18°902'27 19.43845 AU retrograde -386 Dec 06 j 00:31 25°**Ω**50′26

Planetary Pheno	omena of Uranus f	rom -400 th	nrough 100 (UT	(a), Astrodienst A	G 7-Dez-2017 14:4	8, page	2
•			•	* *	386 BCE in historical co		
opposition	-385 Feb 17 j 11:32	23° Ω 48'12		retrograde	-377 Jan 12 j 20:17	3° ჲ 48'36	
min. Earth dist.	-385 Feb 18 j 09:46		17.29638 AU	opposition	-377 Mar 28 j 04:28	1° ≏ 47'29	0°42'53
direct	-385 May 05 j 01:48	21°Ω41'31	17.27030110	min. Earth dist.	-377 Mar 28 j 15:26		17.50064 AU
direct	303 May 03 J 01.40	21 00-151		mm. Earth dist.	-377 May 18 j 02:07	30°RM)	17.30004710
conjunction	-385 Aug 25 j 15:10	26° Ω 13'59	0°43'56	direct	-377 Jun 13 j 08:59	29° Mp 42'37	
				direct	,		
minimum elong	-385 Aug 25 j 15:10	26° Ω 13'59	0°43'55		-377 Jul 09 j 02:58	0∘ ⊽	
max. Earth dist.	-385 Aug 24 j 14:02		19.29869 AU				
	-385 Nov 04 j 16:51	0° ™		conjunction	-377 Oct 02 j 17:54	4° ≏ 09'54	
retrograde	-385 Dec 11 j 01:19	0° ™ 36′50		minimum elong	-377 Oct 02 j 17:54	4° ჲ 09'54	0°37'34
	-384 Jan 17 j 06:55	30° R Ω		max. Earth dist.	-377 Oct 02 j 06:26	4° ჲ 08'06	19.52215 AU
opposition	-384 Feb 22 j 13:12	28° Ω 34'43	0°49'10	retrograde	-376 Jan 17 j 16:30	8° ≏ 28'58	
min. Earth dist.	-384 Feb 23 j 10:05	28° Ω 32'27	17.30360 AU	opposition	-376 Apr 01 j 06:09	6° ≏ 27'55	0°40'45
direct	-384 May 09 j 05:14	26° Ω 28'09		min. Earth dist.	-376 Apr 01 j 16:24	6° ≏ 26'50	17.54479 AU
	-384 Aug 13 j 15:43	0° m)		direct	-376 Jun 17 j 10:27	4° £ 23′18	
conjunction	-384 Aug 29 j 17:29	1° mp 00'29	0°44'10	conjunction	-376 Oct 06 j 14:48	8° ≏ 49'22	0°35'33
minimum elong	-384 Aug 29 j 17:29	1° mp 00'29	0°44'10	minimum elong	-376 Oct 06 j 14:48	8° Ω 49'22	0°35'33
Č	-384 Aug 28 j 18:52		19.30915 AU	max. Earth dist.	-376 Oct 06 j 04:51		19.56812 AU
max. Earth dist.	• •	-	19.30913 AU		,		19.30812 AU
retrograde	-384 Dec 15 j 01:39	5° To 23'04		retrograde	-375 Jan 21 j 14:28	13° Ω 07'39	
opposition	-383 Feb 26 j 15:09	3°My21'07		opposition	-375 Apr 06 j 07:19	11° ≏ 06'41	0°38'22
min. Earth dist.	-383 Feb 27 j 10:52		17.31699 AU	min. Earth dist.	-375 Apr 06 j 14:39	11° Ω 05'54	17.59235 AU
direct	-383 May 14 j 08:51	1° m 14'44		direct	-375 Jun 22 j 13:07	9° ഫ 02'20	
conjunction	-383 Sep 03 j 19:21	5° Mp 46′46	0°44'06	conjunction	-375 Oct 11 j 10:49	13° ≏ 27'04	0°33'18
minimum elong	-383 Sep 03 j 19:21	5° Mp 46'46	0°44'06	minimum elong	-375 Oct 11 j 10:50	13° ≏ 27'04	0°33'17
max. Earth dist.	-383 Sep 02 j 21:15	5° m 43'16	19.32555 AU	max. Earth dist.	-375 Oct 11 j 03:42	13° ≏ 25'58	19.61745 AU
retrograde	-383 Dec 20 j 01:36	10° m) 09'04		retrograde	-374 Jan 26 j 10:02	17° Ω 44'34	
opposition	-382 Mar 03 j 17:13	8° Mp 07'16	0°49'01	opposition	-374 Apr 11 j 08:11	15° Ω 43'39	0°35'45
min. Earth dist.	-382 Mar 04 j 11:58		17.33625 AU	min. Earth dist.	-374 Apr 11 j 14:31		17.64350 AU
	·		17.55025 AU				17.04330 AU
direct	-382 May 19 j 12:01	6° Mp 01'06		direct	-374 Jun 27 j 13:32	13° ≏ 39'35	
conjunction	-382 Sep 08 j 20:50	10° Mp 32'43		conjunction	-374 Oct 16 j 05:48	18° ≏ 02'55	0°30'52
minimum elong	-382 Sep 08 j 20:50	10° m 32'43		minimum elong	-374 Oct 16 j 05:48	18° ≏ 02'55	0°30'52
max. Earth dist.	-382 Sep 08 j 01:03	10° Mp 29'35	19.34751 AU	max. Earth dist.	-374 Oct 16 j 00:14	18° ≏ 02'03	19.67055 AU
retrograde	-382 Dec 25 j 02:01	14° m 54'38		retrograde	-373 Jan 31 j 06:48	22° ≏ 19'36	
opposition	-381 Mar 08 j 19:35	12° m 53'00	0°48'26	opposition	-373 Apr 16 j 08:28	20° ♀ 18'45	0°32'56
min. Earth dist.	-381 Mar 09 j 12:39	12° m 51'10	17.36061 AU	min. Earth dist.	-373 Apr 16 j 11:32	20° ≏ 18'26	17.69844 AU
direct	-381 May 24 j 16:48	10° m) 47'06		direct	-373 Jul 02 j 14:20	18° ≏ 15'01	
	2011114) 21) 10.10	10 19 17 00		4.1.000	575 var 02 j 11.20	10 —10 01	
conjunction	-381 Sep 13 j 21:30	15° Mp 18'06	0°43'04	conjunction	-373 Oct 20 j 23:53	22° £ 36'54	0°28'15
minimum elong	-381 Sep 13 j 21:30	15° Mg 18'06		minimum elong	-373 Oct 20 j 23:53	22° ⊆ 36'54	0°28'15
Č				_			
max. Earth dist.	-381 Sep 13 j 02:46		19.37430 AU	max. Earth dist.	-373 Oct 20 j 21:37		19.72733 AU
retrograde	-381 Dec 30 j 00:32	19° m 39'36		retrograde	-372 Feb 05 j 01:26	26° Ω 52'45	
opposition	-380 Mar 12 j 22:01	17° m 38'07		opposition	-372 Apr 20 j 08:18	24° ≏ 52'00	0°29'55
min. Earth dist.	-380 Mar 13 j 14:18	17° Mp 36'22	17.38974 AU	min. Earth dist.	-372 Apr 20 j 10:03	24° ≏ 51'49	17.75701 AU
direct	-380 May 28 j 20:10	15° Mp 32'27		direct	-372 Jul 06 j 13:52	22° ≏ 48'38	
conjunction	-380 Sep 17 j 21:45	20° Mp 02'44	0°42'06	conjunction	-372 Oct 24 j 17:03	27° ≙ 09'01	0°25'29
minimum elong	-380 Sep 17 j 21:45	20° Mp 02'44	0°42'05	minimum elong	-372 Oct 24 j 17:03	27° ♀ 09'01	0°25'28
max. Earth dist.	-380 Sep 17 j 04:58	20° m 00'05	19.40562 AU	max. Earth dist.	-372 Oct 24 j 16:05	27° Ω 08'53	19.78771 AU
retrograde	-379 Jan 03 j 00:09	24° m 23'43			-372 Dec 13 j 20:11	0°M	
opposition	-379 Mar 18 j 00:11	22° m 22'22	0°46'17	retrograde	-371 Feb 08 j 20:56	1°M24'04	
min. Earth dist.	-379 Mar 18 j 14:23		17.42296 AU	retrograde	-371 Apr 10 j 10:24	30°R Ω	
	-		17.42290 AU	***			0026145
direct	-379 Jun 03 j 01:28	20°M) 16'59		opposition	-371 Apr 25 j 07:17	29° £ 23'26	
				min. Earth dist.	-371 Apr 25 j 05:56		17.81895 AU
conjunction	-379 Sep 22 j 21:19	24° Mp 46'23		direct	-371 Jul 11 j 12:55	27° ≏ 20'27	
minimum elong	-379 Sep 22 j 21:19	24° Mp 46'23			-371 Oct 01 j 22:42	0°M₊	
max. Earth dist.	-379 Sep 22 j 05:59	-•	19.44081 AU				
retrograde	-378 Jan 07 j 21:22	29° Mp 06'47		conjunction	-371 Oct 29 j 09:30	1°M39'22	0°22'35
opposition	-378 Mar 23 j 02:29	27° m 05'34	0°44'44	minimum elong	-371 Oct 29 j 09:30	1°M39'22	0°22'35
min. Earth dist.	-378 Mar 23 j 16:03		17.46005 AU	max. Earth dist.	-371 Oct 29 j 11:52		19.85111 AU
direct	-378 Jun 08 j 04:16	25° mp 00'26		retrograde	-370 Feb 13 j 14:25	5°M53'34	
3	5,5 tan 00 j 07.10	ny 00 20		opposition	-370 Apr 30 j 06:01	3°M53'06	0°23'26
conjunction	-378 Sep 27 j 19:58	29° m 28'51	0°39'20	min. Earth dist.	-370 Apr 30 j 03:15		17.88358 AU
		-					17.00330 AU
minimum elong	-378 Sep 27 j 19:58	29° m 28'51	0°39'20	direct	-370 Jul 16 j 11:36	1°M50'35	
max. Earth dist.	-378 Sep 27 j 06:21		19.47977 AU		250.37		0016:22
	-378 Oct 06 j 01:58	0∘ ⊽		conjunction	-370 Nov 03 j 00:50	6°M07'57	0°19'33

Planetary Pheno Attention, astronom	ical year style is used: T	he year -370 i	n astronomical cou	unting style is the year 3	371 BCE in historical co	unting style.	3
minimum elong	-370 Nov 03 j 00:50	6° ™ 07'57		opposition	-363 Jun 01 j 02:33	4° ∡ ³32′03	0°-1'-53
max. Earth dist.	-370 Nov 03 j 04:23		19.91695 AU	direct	-363 Aug 17 j 01:26	2° ∡ ³32′22	
retrograde	-369 Feb 18 j 08:45	10°M21'22				. 	
opposition	-369 May 05 j 04:05	8°M21'02		conjunction	-363 Dec 02 j 16:07	6° ₹ 39'09	0°-3'-25
min. Earth dist. direct	-369 May 04 j 22:33 -369 Jul 21 j 09:06	6°M18'57	17.95035 AU	minimum elong behind sun begin	-363 Dec 02 j 16:07 -363 Dec 02 j 09:38	6° х ⁷ 39'09 6° х ⁷ 38'13	0°03'27
direct	-309 Jul 21 J 09.00	0 1161037		behind sun end	-363 Dec 02 j 09:36	6° × ⁷ 40'06	
conjunction	-369 Nov 07 j 15:39	10°M34'49	0°16'25	max. Earth dist.	-363 Dec 03 j 08:30		20.38391 AU
minimum elong	-369 Nov 07 j 15:39	10°M34'49		retrograde	-362 Mar 20 j 17:45	10° ∡ '47'02	
max. Earth dist.	-369 Nov 07 j 22:22	10°M35'50	19.98441 AU	opposition	-362 Jun 05 j 19:47	8° ∡ ¹47'31	0°-5'-32
retrograde	-368 Feb 23 j 01:04	14° M 47'24		min. Earth dist.	-362 Jun 05 j 03:07	8° ∡ ³49'12	18.41475 AU
opposition	-368 May 09 j 01:26	12°M47'15		direct	-362 Aug 21 j 18:10	6° ≯ 48'09	
min. Earth dist.	-368 May 08 j 18:33		18.01830 AU			=	
direct	-368 Jul 25 j 06:15	10°M45'38		conjunction	-362 Dec 07 j 01:26	10° ×753'29	0°-6'-40
conjunction	-368 Nov 11 j 05:31	14° M 59'57	0012112	minimum elong behind sun begin	-362 Dec 07 j 01:25 -362 Dec 06 j 19:18	10° ₹ 53'29 10° ₹ 52'35	0°06'41
minimum elong	-368 Nov 11 j 05:31	14 IIL3937 14°M59'57		behind sun begin	-362 Dec 00 j 19.18 -362 Dec 07 j 07:33	10 x · 32 33 10° x 754′22	
behind sun begin	-368 Nov 11 j 01:33	14°M59'22	0 13 13	max. Earth dist.	-362 Dec 07 j 18:27		20.44538 AU
behind sun end	-368 Nov 11 j 09:28	15°M00'32		retrograde	-361 Mar 25 j 06:11	15°× 00'38	20.11030110
	-368 Nov 11 j 05:45	15° ™		opposition	-361 Jun 10 j 12:14	13° ∡ '01'07	0°-9'-6
max. Earth dist.	-368 Nov 11 j 13:02	15°M01'05	20.05274 AU	min. Earth dist.	-361 Jun 09 j 18:32	13° ∡ 02'55	18.47557 AU
retrograde	-367 Feb 26 j 18:15	19° M 11'45		direct	-361 Aug 26 j 07:24	11° ∡ °02'01	
opposition	-367 May 13 j 22:14	17° M 11'45	0°12'51				
min. Earth dist.	-367 May 13 j 13:09		18.08683 AU	conjunction	-361 Dec 11 j 10:19	15° ∡ °05'58	
direct	-367 Jul 30 j 01:54	15° ™ 10'33		minimum elong	-361 Dec 11 j 10:19	15° ⋌ '05'58	0°09'52
				behind sun begin	-361 Dec 11 j 04:57	15° ₹ 05'11	
conjunction	-367 Nov 15 j 18:43	19°M23'21	0°09'57	behind sun end	-361 Dec 11 j 15:40	15° 🗷 06'45	20.50541.411
minimum elong behind sun begin	-367 Nov 15 j 18:44 -367 Nov 15 j 13:23	19°M23'21 19°M22'34	0°09'57	max. Earth dist. retrograde	-361 Dec 12 j 05:46 -360 Mar 28 j 18:00	15°×'08'52 19°×'12'23	20.50541 AU
behind sun end	-367 Nov 16 j 00:05	19°M24'09		min. Earth dist.	-360 Jun 13 j 08:01		18.53490 AU
max. Earth dist.	-367 Nov 16 j 05:08		20.12115 AU	opposition	-360 Jun 14 j 03:35	17° 🗷 14'55	
retrograde	-366 Mar 03 j 09:16	23°M34'21	20.12113 110	direct	-360 Aug 29 j 22:25	15° ₹ 14'06	0 12 30
opposition	-366 May 18 j 18:27	21°M34'31	0°09'11				
min. Earth dist.	-366 May 18 j 07:55	21°M35'35	18.15500 AU	conjunction	-360 Dec 14 j 18:24	19° х 16′43	0°-12'-57
direct	-366 Aug 03 j 21:45	19°M33'45		minimum elong	-360 Dec 14 j 18:24	19° ∡ 16'43	0°12'58
				behind sun begin	-360 Dec 14 j 14:19	19° ∡ 16′07	
conjunction	-366 Nov 20 j 07:07			behind sun end	-360 Dec 14 j 22:29	19° ∡ 17'18	
minimum elong	-366 Nov 20 j 07:06	23°M45'01	0°06'40	max. Earth dist.	-360 Dec 15 j 14:29		20.56406 AU
behind sun begin	-366 Nov 20 j 00:58	23°M44'06		retrograde	-359 Apr 02 j 05:19	23° x ⁷ 22'29 21° x ⁷ 23'02	09 171 1
behind sun end max. Earth dist.	-366 Nov 20 j 13:14 -366 Nov 20 j 18:06	23°M45'55	20.18899 AU	opposition min. Earth dist.	-359 Jun 18 j 18:27 -359 Jun 17 j 22:03		18.59307 AU
retrograde	-365 Mar 08 j 01:17	27°M55'14	20.18899 AU	direct	-359 Sep 03 j 09:33	19° × 23'03	18.39307 AU
opposition	-365 May 23 j 13:55	25°M55'30	0°05'29	direct	557 Sep (55) (7.55	17 7 2430	
min. Earth dist.	-365 May 23 j 01:42		18.22244 AU	conjunction	-359 Dec 19 j 01:58	23° ∡ ¹25'51	0°-15'-59
direct	-365 Aug 08 j 15:27	23°M55'08		minimum elong	-359 Dec 19 j 01:58	23° ∡ °25'51	0°16'00
				behind sun begin	-359 Dec 19 j 00:44	23° × 25'41	
conjunction				ounna san ougm	-339 DCC 19 J 00.44		
conjunction	-365 Nov 24 j 18:54	28°M04'54	0°03'20	behind sun end	-359 Dec 19 j 03:11	23° ∡ ¹26′02	
minimum elong	-365 Nov 24 j 18:54	28°M04'54	0°03'20 0°03'20	behind sun end max. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21	23° ∡ ¹29'10	20.62151 AU
minimum elong behind sun begin	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24	28°M04'54 28°M03'56		behind sun end max. Earth dist. retrograde	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42	23° х 29′10 27° х 31′00	
minimum elong behind sun begin behind sun end	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24	28°M04'54 28°M03'56 28°M05'51	0°03'20	behind sun end max. Earth dist. retrograde min. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05	23° х 29'10 27° х 31'00 25° х 33'53	18.64978 AU
minimum elong behind sun begin	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26	28°M04'54 28°M03'56 28°M05'51 28°M06'56		behind sun end max. Earth dist. retrograde min. Earth dist. opposition	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30	23° 🖈 29'10 27° 🖈 31'00 25° 🖈 33'53 25° 🖈 31'37	18.64978 AU
minimum elong behind sun begin behind sun end max. Earth dist.	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0°×7	0°03'20	behind sun end max. Earth dist. retrograde min. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05	23° х 29'10 27° х 31'00 25° х 33'53	18.64978 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0°\$\mathref{X}\$ 2°\$\mathref{X}\$14'19	0°03'20 20.25570 AU	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45	23° 🗷 29'10 27° 🗷 31'00 25° 🗷 33'53 25° 🗷 31'37 23° 🗷 33'24	18.64978 AU 0°-19'-19
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0°\$\vec{x}\$14'19 0°\$\vec{x}\$14'42	0°03'20 20.25570 AU 0°01'47	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01	23° 🗷 29'10 27° 🗷 31'00 25° 🗷 33'53 25° 🗷 31'37 23° 🗷 33'24 27° 🗷 33'33	18.64978 AU 0°-19'-19 0°-18'-54
minimum elong behind sun begin behind sun end max. Earth dist. retrograde	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55	28°M.04'54 28°M.03'56 28°M.05'51 28°M.06'56 0°\$\stackstyle{\mathrm{Z}}\$ 2°\$\stackstyle{\mathrm{Z}}\$ 14'19 0°\$\stackstyle{\mathrm{Z}}\$ 16'05	0°03'20 20.25570 AU	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00	23° \$\times 29'10 27° \$\times 31'00 25° \$\times 33'53 25° \$\times 33'24 27° \$\times 33'33 27° \$\times 33'33	18.64978 AU 0°-19'-19 0°-18'-54
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0°\$\vec{x}\$14'19 0°\$\vec{x}\$14'42	0°03'20 20.25570 AU 0°01'47	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01	23° \$\times 29'10 27° \$\times 31'00 25° \$\times 33'53 25° \$\times 33'24 27° \$\times 33'33 27° \$\times 33'33	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist.	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0°\$\vec{x}\$ 2°\$\vec{x}\$14'19 0°\$\vec{x}\$16'05 30°RM	0°03'20 20.25570 AU 0°01'47	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54	23° \$\times^2 29'10 27° \$\times^3 31'00 25° \$\times^3 33'53 25° \$\times^3 31'37 23° \$\times^3 33'24 27° \$\times^3 33'33 27° \$\times^3 36'55	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist.	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Aug 12 j 09:44	28°M04'54 28°M03'56 28°M05'51 28°M06'56 0° 🖈 2° 🖈 14'19 0° 🖈 16'05 30°RM 28°M14'41	0°03'20 20.25570 AU 0°01'47	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46	23° 🖈 29'10 27° 🖈 31'00 25° 🖈 33'53 25° 🖈 31'37 23° 🖈 33'24 27° 🖈 33'33 27° 🖈 36'55 0° 云	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Aug 12 j 09:44 -364 Oct 17 j 05:12 -364 Nov 21 j 23:44	28°M04'54 28°M03'56 28°M06'56 0° ¾ 2° ¾ 14'19 0° ¾ 14'42 0° ¾ 16'05 30°RM 28°M14'41 0° ¾	0°03'20 20.25570 AU 0°01'47 18.28829 AU	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52	23° 🗷 29'10 27° 🗷 31'00 25° 🗷 33'53 25° 🗷 31'37 23° 🗷 33'24 27° 🗷 33'33 27° 🗷 36'55 0° 💍 1° 🗃 38'09	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Oct 17 j 05:12 -364 Nov 28 j 05:48	28°M.04'54 28°M.05'51 28°M.06'56 0°\$\strue{7}\] 2°\$\strue{7}\]14'19 0°\$\strue{7}\]14'42 0°\$\strue{7}\]16'05 30°RM. 28°M.14'41 0°\$\strue{7}\] 2°\$\strue{7}\]20'19	0°03'20 20.25570 AU 0°01'47 18.28829 AU 0°00'-3	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Jun 26 j 23:02	23° ズ29'10 27° ズ31'00 25° ズ33'53 25° ズ33'37 23° ズ33'24 27° ズ33'33 27° ズ33'33 27° ズ36'55 0° で 1° でる38'09 30° R ズ 29° ズ38'50 29° ズ41'07	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction minimum elong	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Oct 17 j 05:12 -364 Nov 28 j 05:48 -364 Nov 28 j 05:48 -364 Nov 28 j 05:48	28°M.04'54 28°M.03'56 28°M.05'51 28°M.06'56 0°\$\tilde{\sigma}\rightarrow{2}\rightarrow{14'19} 0°\$\tilde{\sigma}\rightarrow{16'05} 30°RM. 28°M.14'41 0°\$\tilde{\sigma}\rightarrow{2}\righ	0°03'20 20.25570 AU 0°01'47 18.28829 AU	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Jun 26 j 23:02 -357 Sep 12 j 08:30	23° ズ29'10 27° ズ31'00 25° ズ33'53 25° ズ33'37 23° ズ33'24 27° ズ33'33 27° ズ33'33 27° ズ36'55 0° 云 1° 云38'09 30° R ズ 29° ズ38'50 29° ズ41'07 27° ズ40'54	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction minimum elong behind sun begin	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Oct 17 j 05:12 -364 Nov 21 j 23:44 -364 Nov 28 j 05:48 -364 Nov 28 j 05:48 -364 Nov 27 j 23:49	28°M.04'54 28°M.03'56 28°M.05'51 28°M.06'56 0° 🖈 2° 🖈 14'19 0° 🖈 16'05 30°RM. 28°M.14'41 0° 🖈 2° 🖈 20'19 2° 🖈 22'57 2° 🔻 22'57	0°03'20 20.25570 AU 0°01'47 18.28829 AU 0°00'-3	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Jun 26 j 23:02	23° ズ29'10 27° ズ31'00 25° ズ33'53 25° ズ33'37 23° ズ33'24 27° ズ33'33 27° ズ33'33 27° ズ36'55 0° で 1° でる38'09 30° R ズ 29° ズ38'50 29° ズ41'07	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction minimum elong behind sun begin behind sun end	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Aug 12 j 09:44 -364 Oct 17 j 05:12 -364 Nov 21 j 23:44 -364 Nov 28 j 05:48 -364 Nov 27 j 23:49 -364 Nov 28 j 11:46	28°M.04'54 28°M.03'56 28°M.05'51 28°M.06'56 0° 🖈 2° 🖈 14'19 0° 🖈 16'05 30°RM. 28°M.14'41 0° 🖈 2° 🖈 20'19 2° 🔻 22'57 2° 🔻 22'57 2° 🔻 22'05 2° 🔻 23'49	0°03'20 20.25570 AU 0°01'47 18.28829 AU 0°00'-3 0°00'04	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Sep 12 j 08:30 -357 Nov 28 j 11:27	23° \$\times 29'10 27° \$\times 31'00 25° \$\times 33'53 25° \$\times 33'24 27° \$\times 33'33 27° \$\times 33'33 27° \$\times 33'33 27° \$\times 36'55 0° \$\times 38'09 30° \$\times 29° \$\times 41'07 27° \$\times 40'54 0° \$\times 6	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU 0°-22'-29 18.70492 AU
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Aug 12 j 09:44 -364 Oct 17 j 05:12 -364 Nov 21 j 23:44 -364 Nov 28 j 05:48 -364 Nov 28 j 05:48 -364 Nov 28 j 11:46 -364 Nov 28 j 11:46 -364 Nov 28 j 19:44	28°M.04'54 28°M.03'56 28°M.05'51 28°M.06'56 0° 🖈 2° 🖈 14'19 0° 🖈 16'05 30°RM. 28°M.14'41 0° 🖈 2° 🖈 20'19 2° 🖈 22'57 2° 🖈 22'57 2° 🗷 22'57 2° 🗷 23'49 2° 🗷 25'03	0°03'20 20.25570 AU 0°01'47 18.28829 AU 0°00'-3	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Sep 12 j 08:30 -357 Nov 28 j 11:27 -357 Dec 27 j 15:45	23° \$\times 29'10 27° \$\times 31'00 25° \$\times 33'53 25° \$\times 33'34 27° \$\times 33'33 27° \$\times 33'55 0° \$\times 1° \$\times 38'09 30° \$\times \times 29° \$\times 41'07 27° \$\times 40'54 0° \$\times 1° \$\times 39'57	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU 0°-22'-29 18.70492 AU 0°-21'-43
minimum elong behind sun begin behind sun end max. Earth dist. retrograde opposition min. Earth dist. direct desc. node conjunction minimum elong behind sun begin behind sun end	-365 Nov 24 j 18:54 -365 Nov 24 j 12:24 -365 Nov 25 j 01:24 -365 Nov 25 j 08:26 -365 Dec 27 j 15:41 -364 Mar 11 j 14:58 -364 May 27 j 08:38 -364 May 26 j 18:55 -364 Jun 02 j 09:35 -364 Aug 12 j 09:44 -364 Oct 17 j 05:12 -364 Nov 21 j 23:44 -364 Nov 28 j 05:48 -364 Nov 27 j 23:49 -364 Nov 28 j 11:46	28°M.04'54 28°M.05'51 28°M.06'56 0° 🖈 2° 🖈 14'19 0° 🖈 16'05 30°RM. 28°M.14'41 0° 🖈 2° 🖈 20'19 2° 🔻 22'57 2° 🔻 22'57 2° 🔻 22'57 2° 🔻 23'49 2° 🔻 25'03 6° 🔻 31'36	0°03'20 20.25570 AU 0°01'47 18.28829 AU 0°00'-3 0°00'04	behind sun end max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-359 Dec 19 j 03:11 -359 Dec 20 j 00:21 -358 Apr 06 j 16:42 -358 Jun 22 j 10:05 -358 Jun 23 j 08:30 -358 Sep 07 j 22:45 -358 Dec 23 j 09:01 -358 Dec 23 j 09:00 -358 Dec 24 j 07:54 -357 Feb 05 j 16:46 -357 Apr 11 j 03:31 -357 Jun 19 j 01:35 -357 Jun 27 j 21:52 -357 Sep 12 j 08:30 -357 Nov 28 j 11:27	23° \$\times 29'10 27° \$\times 31'00 25° \$\times 33'53 25° \$\times 33'34 27° \$\times 33'33 27° \$\times 33'55 0° \$\times 10' \$\times 38'09 30° \$\times \times 10' \$\times 29° \$\times 43'50 29° \$\times 40'54 0° \$\times 10' \$\times 39'57 1° \$\times 339'57	18.64978 AU 0°-19'-19 0°-18'-54 0°18'55 20.67740 AU 0°-22'-29 18.70492 AU 0°-21'-43

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 4 Attention, astronomical year style is used: The year -356 in astronomical counting style is the year 357 BCE in historical counting style. -356 Apr 14 j 14:21 5°**ප**44'01 retrograde min. Earth dist. -348 Aug 02 i 18:33 6°≈01'03 19.04008 AU -356 Jun 30 i 09:54 min. Earth dist. 3°る47'15 18.75778 AU direct -348 Oct 18 j 12:46 4°≈02'10 -356 Jul 01 i 10:29 3°₹44'48 0°-25'-32 opposition direct -356 Sep 15 j 19:55 1°る47'10 -347 Jan 31 j 17:52 7°≈54'37 0°-40'-21 conjunction minimum elong -347 Jan 31 j 17:52 7°≈54'37 0°40'22 -347 Feb 01 j 20:15 conjunction -356 Dec 30 j 21:56 5°る45'11 0°-24'-24 max. Earth dist. 7°≈58'24 21.04725 AU -356 Dec 30 j 21:56 5°る45'11 0°24'27 -347 May 21 j 23:42 11°≈56'01 minimum elong retrograde -356 Dec 31 j 22:54 5°る48'50 20.78299 AU -347 Aug 07 j 03:52 max. Earth dist. min. Earth dist. 9°≈59'13 19.05442 AU -355 Apr 19 j 00:38 -347 Aug 08 j 04:18 9°₹48'48 retrograde opposition 9°**≈**56'46 0°-45'-15 -355 Jul 05 j 22:40 7°る49'38 0°-28'-26 opposition direct -347 Oct 22 j 17:16 8°≈00'27 min. Earth dist. -355 Jul 04 j 22:07 7°る52'06 18.80799 AU -355 Sep 20 j 04:42 5°**る**52'18 -346 Feb 04 j 23:01 11°≈52'35 0°-41'-31 direct conjunction -346 Feb 04 j 23:01 minimum elong 11°**≈**52'35 0°41'33 conjunction -354 Jan 04 j 04:04 9°る49'22 0°-26'-58 max. Earth dist. -346 Feb 06 j 01:50 11°≈56'25 21.05967 AU minimum elong -354 Jan 04 j 04:03 9°**る**49'21 0°26'59 -346 Apr 08 j 09:08 15°≈ max. Earth dist. -354 Jan 05 j 06:30 9°る53'13 20.83164 AU retrograde -346 May 26 j 08:29 15°≈53'55 retrograde -354 Apr 23 j 11:06 13°る52'33 -346 Jul 14 j 16:40 15°R≈ min. Earth dist. -354 Jul 09 j 08:10 11°る56'04 18.85492 AU min. Earth dist. -346 Aug 11 j 10:33 13°≈57'08 19.06493 AU opposition -354 Jul 10 j 10:09 11°る53'28 0°-31'-11 opposition -346 Aug 12 j 11:45 13°≈54'36 0°-46'-26 direct -354 Sep 24 j 14:45 9°**る**56'24 direct -346 Oct 27 j 00:22 11°≈58'18 -345 Jan 25 j 10:47 15°≈ conjunction -353 Jan 08 i 09:47 13°る52'34 0°-29'-23 minimum elong -353 Jan 08 i 09:47 13°る52'34 0°29'25 conjunction -345 Feb 09 i 04:07 15°**≈**50'12 0°-42'-29 max. Earth dist. -353 Jan 09 i 12:06 13°る56'24 20.87664 AU minimum elong -345 Feb 09 i 04:07 15°≈50'12 0°42'30 retrograde -353 Apr 27 j 20:26 17°る55'24 max. Earth dist. -345 Feb 10 i 06:08 15°≈53'56 21.06827 AU opposition -353 Jul 14 i 21:15 15°**る**56'23 0°-33'-47 retrograde -345 May 30 j 15:43 19°≈51'34 min. Earth dist. -353 Jul 13 j 19:53 15°る58'55 18.89800 AU opposition -345 Aug 16 j 19:06 17°≈52'11 0°-47'-23 -353 Sep 28 j 22:47 13°る59'32 min. Earth dist. -345 Aug 15 j 19:17 17°≈54'34 19.07176 AU direct direct -345 Oct 31 j 04:12 15°≈55'54 -352 Jan 12 j 15:36 17°る54'55 0°-31'-39 conjunction -352 Jan 12 j 15:36 17°る54'55 0°31'40 -344 Feb 13 j 09:29 19°**≈**47'41 0°-43'-14 minimum elong conjunction -352 Jan 13 j 18:49 -344 Feb 13 j 09:29 17°る58'52 20.91748 AU minimum elong 0°43'15 max. Earth dist. 19°≈47'41 -352 May 01 j 06:43 21°る57'24 -344 Feb 14 j 11:39 retrograde max. Earth dist. 19°≈51'26 21.07331 AU -352 Jul 17 j 05:08 20°る01'03 18.93648 AU -344 Jun 03 j 00:15 min. Earth dist. retrograde 23°≈49'07 -352 Jul 18 j 07:31 -344 Aug 19 j 01:30 19°**る**58'25 0°-36'-11 min. Earth dist. 21°≈52'09 19.07493 AU opposition -352 Oct 02 j 07:45 18°**る**01'46 -344 Aug 20 j 01:54 direct opposition 21°≈49'42 0°-48'-6 -344 Nov 03 j 10:20 direct 19°**≈**53′26 -351 Jan 15 j 21:06 conjunction 21°る56'25 0°-33'-45 minimum elong -351 Jan 15 j 21:06 21°る56'25 0°33'46 conjunction -343 Feb 16 j 14:56 23°≈45'12 0°-43'-48 max. Earth dist. -351 Jan 16 j 23:46 22°る00'16 20.95345 AU minimum elong -343 Feb 16 j 14:56 23°≈45'12 0°43'49 retrograde -351 May 05 j 14:40 25°**る**58'36 max. Earth dist. -343 Feb 17 j 16:06 23°≈48'48 21.07463 AU opposition -351 Jul 22 j 17:36 23°る59'37 0°-38'-25 retrograde -343 Jun 07 j 07:45 27°≈46'48 min. Earth dist. -351 Jul 21 j 16:14 24°る02'10 18.97002 AU min. Earth dist. -343 Aug 23 j 09:58 25°≈49'38 19.07443 AU direct -351 Oct 06 j 14:53 22°る03'08 -343 Aug 24 j 08:48 25°**≈**47′20 0°-48'-36 opposition direct -343 Nov 07 j 14:00 23°**≈**51′05 -350 Jan 20 i 02:29 25°る57'06 0°-35'-41 conjunction -350 Jan 20 j 02:29 -342 Feb 20 i 20:43 27°≈42'56 0°-44'-9 minimum elong 25°る57'06 0°35'42 conjunction -350 Jan 21 i 05:46 26°る01'03 20.98440 AU -342 Feb 20 i 20:43 27°≈42'56 0°44'10 max. Earth dist. minimum elong -350 May 10 j 00:47 29°る59'02 -342 Feb 21 i 21:50 27°≈46'31 21.07231 AU retrograde max. Earth dist. -350 Jul 26 i 00:50 min. Earth dist. 28°る02'38 18.99830 AU -342 Apr 04 i 10:00 0°**₩** opposition -350 Jul 27 j 03:02 28°**ප**00'01 0°-40'-26 retrograde -342 Jun 11 j 16:36 1° **)** 44'44 direct -350 Oct 10 j 23:16 26°る03'37 -342 Aug 22 j 12:57 30°R≈ opposition -342 Aug 28 j 15:24 29°≈45'16 0°-48'-53 -349 Jan 24 j 07:45 -342 Aug 27 j 16:18 29°≈47'35 19.07003 AU conjunction 29°る57'00 0°-37'-26 min. Earth dist. -349 Jan 24 i 07:45 -342 Nov 11 j 19:30 27°≈49'00 minimum elong 29°**る**57'00 0°37'26 direct -349 Jan 25 i 10:19 -341 Jan 25 j 15:23 0°**∀** max. Earth dist. 0°≈00'49 21.01008 AU -349 Jan 25 j 04:38 0°≈ -349 May 14 j 07:40 1°**)** 41'03 0°-44'-18 retrograde 3°≈58'42 -341 Feb 25 j 02:54 conjunction -341 Feb 25 j 02:54 1°**)**41'03 0°44'19 min. Earth dist. -349 Jul 30 j 11:01 2°≈02'06 19.02156 AU minimum elong -349 Jul 31 j 11:55 1°≈59'37 0°-42'-15 max. Earth dist. -341 Feb 26 j 02:41 1°**¥**44′26 21.06581 AU opposition -349 Oct 15 j 04:58 retrograde -341 Jun 16 j 00:12 5°**)**43'06 direct 0°**≈**03'16 -341 Sep 01 j 21:54 opposition 3°**)** 43'37 0°-48'-56 -348 Jan 28 j 12:58 conjunction 3°**≈**56′08 0°-38'-59 min. Earth dist. -341 Sep 01 j 00:51 3°**¥**45'45 19.06140 AU minimum elong -348 Jan 28 j 12:58 3°≈56′08 0°39'01 direct -341 Nov 15 j 23:09 1°**∺**47'21 max. Earth dist. -348 Jan 29 j 16:00 4°≈00'01 21.03095 AU retrograde -348 May 17 j 16:58 7°≈57'39 -340 Feb 29 j 09:35 5°**)** 39'40 0°-44'-14 conjunction opposition -348 Aug 03 j 20:13 5°≈58'29 0°-43'-52 minimum elong -340 Feb 29 j 09:35 5°**)** 39'40 0°44'15

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 5 Attention, astronomical year style is used: The year -340 in astronomical counting style is the year 341 BCE in historical counting style. -340 Mar 01 i 08:49 5°**)**(42'59 21.05501 AU 7°**Υ**'54'27 20.79153 AU max. Earth dist. max. Earth dist. -332 Apr 02 j 19:21 -340 Jun 19 i 09:40 9°\ 42'03 retrograde -332 Jul 22 j 15:04 11°Y59'04 retrograde min. Earth dist. -340 Sep 04 j 07:27 7°**¥**44'38 19.04816 AU opposition -332 Oct 07 j 10:32 9°**Y**'58'28 0°-38'-51 -340 Sep 05 j 04:21 7°**)**(42'32 0°-48'-44 min. Earth dist. -332 Oct 07 j 01:44 9°**Υ**59'23 18.76697 AU opposition -340 Nov 19 j 04:45 direct 5°\ 46'13 -332 Dec 21 j 02:12 8°Y00'19 direct -339 Mar 04 j 16:32 9°\;\;38'54\ 0°-43'-57 -331 Apr 06 j 20:33 11°**Υ**58'31 0°-34'-9 conjunction conjunction 9°****38'54 0°43'59 -339 Mar 04 j 16:32 -331 Apr 06 j 20:33 11°**Y**58'31 0°34'09 minimum elong minimum elong -339 Mar 05 j 14:05 9°**升**41'58 21.03925 AU -331 Apr 07 j 05:01 11°**Υ**59'44 20.74170 AU max. Earth dist. max. Earth dist. -339 Jun 23 j 17:25 -331 Jul 27 j 01:03 16°**Y**05′16 retrograde 13°**)** 41′38 retrograde 14°**Y**04'32 0°-36'-37 -339 Sep 09 j 11:03 -331 Oct 11 j 18:10 opposition 11° **X** 42'04 0°-48'-19 opposition -339 Sep 08 j 16:30 -331 Oct 11 j 11:43 14°**Υ**05'12 18.71600 AU min. Earth dist. 11°**¥**43'57 19.02985 AU min. Earth dist. -339 Nov 23 j 08:34 -331 Dec 25 j 07:57 12°**Y**′06′05 direct 9°**)** 45′40 direct conjunction -338 Mar 09 j 00:17 13°**)** ₹38'47 0°-43'-28 conjunction -330 Apr 11 j 08:57 16°**Y**′05′21 0°-32'-2 minimum elong -338 Mar 09 j 00:17 13°**)** €38'47 0°43'28 minimum elong -330 Apr 11 j 08:57 16°**Y**05′21 0°32'03 max. Earth dist. -338 Mar 09 j 20:46 13°**¥**41'42 21.01837 AU max. Earth dist. -330 Apr 11 j 15:43 16°**Y**06'20 20.68982 AU retrograde -338 Jun 28 j 03:43 17°**)** 41'54 retrograde -330 Jul 31 j 14:32 20°Y12'48 opposition -338 Sep 13 j 17:30 15°**)** 42′15 0°-47'-39 opposition -330 Oct 16 j 01:55 18°**Ƴ**11'56 0°-34'-12 min. Earth dist. -338 Sep 12 j 23:29 15°**)** 44′05 19.00617 AU min. Earth dist. -330 Oct 15 j 20:09 18°**Y**12'32 18.66305 AU direct -338 Nov 27 j 14:38 13°**)**(45'42 direct -330 Dec 29 j 16:32 16°**Y**13'11 conjunction -337 Mar 13 j 08:29 17°**)** 39'20 0°-42'-45 conjunction -329 Apr 15 j 22:07 20°**Y**13′38 0°-29'-45 minimum elong -337 Mar 13 j 08:29 17°**)** € 39'20 0°42'46 minimum elong -329 Apr 15 j 22:07 20°Y13'38 0°29'47 max. Earth dist. -337 Mar 14 j 02:49 17°**)**(41'57 20.99193 AU max. Earth dist. -329 Apr 16 j 03:05 20°**Y**14′21 20.63584 AU retrograde -337 Jul 02 i 11:34 21°\ 42'52 retrograde -329 Aug 05 j 01:44 24°Y21'49 min. Earth dist. -337 Sep 17 j 08:48 19°**¥**44'41 18.97699 AU opposition -329 Oct 20 i 10:20 22°**Y**'20'52 0°-31'-35 opposition -337 Sep 18 j 00:14 19°**¥**43′06 0°-46'-45 min. Earth dist. -329 Oct 20 j 07:00 22°Υ21'13 18.60810 AU -337 Dec 01 j 19:01 17°**)**(46'21 direct -328 Jan 02 j 23:09 20°Y21'51 direct 24°**Y**23'31 -336 Mar 16 j 17:07 21°**)**(40'33 0°-41'-50 -328 Apr 19 j 11:58 0°-27'-18 conjunction conjunction -336 Mar 16 j 17:07 21°**)**40'33 0°41'51 minimum elong -328 Apr 19 j 11:58 24°**Y**23'31 0°27'19 minimum elong 24°**Υ**23'57 20.58007 AU -336 Mar 17 j 10:07 21°**)** 42'58 20.96025 AU max. Earth dist. -328 Apr 19 j 14:57 max. Earth dist. 28°**Y**32'30 -336 Jul 05 j 22:11 -328 Aug 08 j 16:24 25°**)** 44'31 retrograde retrograde -336 Sep 21 j 06:49 23°**)** 44'36 0°-45'-37 -328 Oct 23 j 19:05 26° Y 31'28 0°-28'-47 opposition opposition 23°**¥**46′07 18.94273 AU -328 Oct 23 j 16:40 -336 Sep 20 j 15:58 min. Earth dist. min. Earth dist. 26°Υ31'44 18.55129 AU -336 Dec 05 j 01:27 21°**)**47'37 -327 Jan 06 j 08:48 24° Y 32'11 direct direct conjunction -335 Mar 21 j 02:13 25°**)** 42'27 0°-40'-42 conjunction -327 Apr 24 j 02:51 28°Y35'10 0°-24'-41 minimum elong -335 Mar 21 j 02:14 25°\dagger42'27 0°40'43 minimum elong -327 Apr 24 j 02:51 28°Y35'10 0°24'43 25°**)**(44'35 20.92367 AU max. Earth dist. -335 Mar 21 j 17:13 max. Earth dist. -327 Apr 24 j 04:01 28°**Y**35'20 20.52220 AU retrograde -335 Jul 10 j 06:36 29°**)**(46'53 -327 May 18 j 21:31 0°8 -335 Sep 25 j 13:38 27°**)** 46'48 0°-44'-16 retrograde -327 Aug 13 j 05:14 2°**8**44'58 opposition min. Earth dist. -335 Sep 25 j 01:18 27°**)**(48'03 18.90399 AU opposition -327 Oct 28 j 04:25 0°843'53 0°-25'-48 direct -335 Dec 09 j 06:22 25°**)** 49'32 min. Earth dist. -327 Oct 28 j 04:38 0°843'52 18.49234 AU -327 Nov 14 j 23:32 30°RY -334 Mar 25 i 11:55 29°\(\frac{1}{45}\)'05 0°-39'-21 -326 Jan 10 j 16:50 28° **Y**44'18 conjunction direct -334 Mar 25 i 11:55 29°\ 45'05 0°39'23 -326 Mar 06 j 20:38 0°8 minimum elong -334 Mar 26 j 01:33 29°\(\)47'01 20.88306 AU max. Earth dist. -334 Mar 29 i 20:16 $0^{\circ}\Upsilon$ conjunction -326 Apr 28 j 18:41 2°848'40 0°-21'-55 3°Y50'01 retrograde -334 Jul 14 j 17:47 minimum elong -326 Apr 28 j 18:41 2°848'40 0°21'55 -334 Sep 29 j 20:23 1°Y49'45 0°-42'-40 max. Earth dist. -326 Apr 28 j 17:15 2°848'28 20.46221 AU opposition min. Earth dist. -334 Sep 29 j 08:39 1°Υ50'58 18.86143 AU retrograde -326 Aug 17 j 20:57 6°859'18 -334 Nov 26 j 03:18 -326 Nov 01 j 14:17 4°858'09 0°-22'-40 30°R**)**€ opposition -334 Dec 13 j 13:17 29°**)** 52'12 direct min. Earth dist. -326 Nov 01 j 15:51 4°857'59 18.43108 AU -334 Dec 30 j 18:32 $0^{\circ}\Upsilon$ -325 Jan 15 j 03:41 direct 2°**8**58'15 -333 Mar 29 j 22:12 3°**Y**48'33 0°-37'-49 -325 May 03 j 11:28 7°804'03 0°-19'00 conjunction conjunction -333 Mar 29 j 22:12 -325 May 03 j 11:28 3°**Y**48'33 0°37'49 7°**8**04'03 0°19'01 minimum elong minimum elong -333 Mar 30 j 09:53 3°**Y**50'13 20.83873 AU -325 May 03 j 08:04 7°**と**03'34 20.39955 AU max. Earth dist. max. Earth dist. -333 Jul 19 j 02:52 7°Υ54'02 -325 Aug 22 j 11:11 11°**8**15'31 retrograde retrograde -333 Oct 04 j 03:21 opposition 5°**Υ**53'36 0°-40'-52 opposition -325 Nov 06 j 00:49 9°**8**14'17 0°-19'-22 min. Earth dist. -333 Oct 03 j 18:03 5°**Υ**54'33 18.81553 AU min. Earth dist. -325 Nov 06 j 05:02 9°**8**13'50 18.36717 AU direct -333 Dec 17 j 18:33 3°**Y**55'44 direct -324 Jan 19 j 13:51 7°**8**14'01 -332 Apr 02 j 09:08 7°**Y**′52'59 0°-36'-4 -324 May 07 j 05:02 11°**8**21'17 0°-15'-58 conjunction conjunction -332 Apr 02 j 09:08 7°Υ52'59 0°36'05 -324 May 07 j 05:02 11°**8**21'17 0°15'59 minimum elong minimum elong

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 6 Attention, astronomical year style is used: The year -324 in astronomical counting style is the year 325 BCE in historical counting style. -324 May 06 j 22:39 11°**8**20'21 20.33456 AU max. Earth dist. max. Earth dist. -318 Jun 03 i 12:23 7°**Д**38'30 19.92391 AU -324 Jul 20 i 16:50 15°8 retrograde -318 Sep 22 j 08:27 11°**Ⅱ**58'20 opposition -324 Aug 26 j 03:25 15°**8**33'35 -318 Dec 05 j 19:28 9°II56'05 0°06'20 retrograde -324 Oct 01 j 20:22 min. Earth dist. -318 Dec 06 j 11:12 15°R₩ 9°**I**54'23 17.89114 AU -324 Nov 09 j 11:54 13°**8**32'13 0°-15'-56 -317 Feb 18 j 20:03 7°**I**52'48 opposition direct min. Earth dist. -324 Nov 09 j 17:32 13°**8**31'37 18.30105 AU -317 Jun 08 j 11:04 12°**耳**07'48 19.85901 AU max. Earth dist. -323 Jan 23 j 01:59 direct 11°**8**31'34 -323 Apr 30 j 12:39 -317 Jun 09 j 06:14 12°**Ⅲ**10'41 15°8 conjunction 0°07'27 -317 Jun 09 j 06:14 0°07'27 minimum elong 12°**Ⅲ**10'41 -317 Jun 09 j 00:04 conjunction -323 May 11 j 23:28 15°**8**40'19 0°-12'-49 behind sun begin 12°**Ⅲ**09'46 minimum elong -323 May 11 j 23:28 15°**8**40'19 0°12'50 behind sun end -317 Jun 09 j 12:24 12°**Ⅱ**11'35 -323 May 11 j 19:24 15°839'44 -317 Sep 27 j 03:44 behind sun begin retrograde 16°**Ⅲ**28'25 -323 May 12 j 03:32 15°840'54 -317 Dec 10 j 11:09 behind sun end opposition 14°**Ⅲ**26′06 0°10'07 max. Earth dist. -323 May 11 j 15:22 15°**8**39'08 20.26735 AU min. Earth dist. -317 Dec 11 j 03:51 14°**I**I24'18 17.82759 AU retrograde -323 Aug 30 j 18:53 19°**8**53'25 direct -316 Feb 23 j 13:46 12°**Ⅲ**22'26 opposition -323 Nov 13 j 23:41 17°**8**51'55 0°-12'-23 max. Earth dist. -316 Jun 12 j 08:05 16°**Ц**38'33 19.79696 AU min. Earth dist. -323 Nov 14 j 07:45 17°**8**51'04 18.23294 AU direct -322 Jan 27 j 14:38 15°850'52 conjunction -316 Jun 13 j 05:48 16°**Ⅱ**41'49 0°10'50 minimum elong -316 Jun 13 j 05:47 16°**Ⅱ**41'49 0°10'51 conjunction -322 May 16 j 18:44 20°**8**01'06 0°-9'-35 behind sun begin -316 Jun 13 j 00:42 16°**Ⅱ**41'04 minimum elong -322 May 16 j 18:44 20°**8**01'06 0°09'36 behind sun end -316 Jun 13 j 10:52 16°**Ⅱ**42'34 behind sun begin -322 May 16 j 13:11 20°800'18 retrograde -316 Sep 30 i 23:30 21°**I**00'18 behind sun end -322 May 17 j 00:17 20°801'54 opposition -316 Dec 14 i 03:34 18°**Ⅱ**57'55 0°13'53 max. Earth dist. -322 May 16 j 07:32 19°859'27 20.19866 AU min. Earth dist. -316 Dec 14 j 21:37 18°**Д**55'58 17.76720 AU retrograde -322 Sep 04 i 11:05 24°815'01 direct -315 Feb 27 j 07:52 16°**I**I53'54 -322 Nov 18 j 11:51 22°**8**13'21 0°-8'-45 max. Earth dist. -315 Jun 17 j 08:27 21° II 11'30 19.73809 AU opposition min. Earth dist. -322 Nov 18 j 21:24 22°**8**12'20 18.16376 AU -321 Feb 01 j 04:20 20°811'50 -315 Jun 18 j 06:16 21°**Ⅱ**14'48 0°14'11 direct conjunction -315 Jun 18 j 06:15 21°**I**14'48 0°14'11 minimum elong -315 Jun 18 j 03:12 21°**Ⅱ**14'21 -321 May 21 j 14:53 24°**8**23'36 0°-6'-17 behind sun begin conjunction -315 Jun 18 j 09:18 -321 May 21 j 14:53 24°**8**23'36 behind sun end 21°II15'15 minimum elong 0°06'17 -321 May 21 j 08:29 24°**8**22'41 -315 Oct 05 j 20:53 25°**Ⅲ**33'58 behind sun begin retrograde -321 May 21 j 21:17 24°**8**24'32 -315 Dec 18 j 20:48 23°II31'36 0°17'35 behind sun end opposition max. Earth dist. -321 May 21 j 02:25 -315 Dec 19 j 15:32 24°**8**21'46 20.12911 AU min. Earth dist. 23°**Ц**29'34 17.70986 AU -321 Sep 09 j 03:45 28°**8**38'18 -314 Mar 04 j 03:17 21°**Ⅲ**27'17 retrograde direct -314 Jun 22 j 07:09 -321 Nov 23 j 00:49 26°**8**36'29 0°-5'-2 25°**Ц**45'58 19.68232 AU opposition max. Earth dist. -321 Nov 23 j 12:21 26°**8**35'15 18.09413 AU min. Earth dist. direct -320 Feb 05 j 19:05 24°**8**34'32 conjunction -314 Jun 23 j 07:19 25°II49'38 0°17'28 minimum elong -314 Jun 23 j 07:19 25°**Ⅱ**49'38 0°17'28 conjunction -320 May 25 j 11:25 28°**8**47'48 0°-2'-55 -314 Sep 22 j 04:04 0ಂತಾ minimum elong -320 May 25 j 11:25 28°**8**47'48 0°02'56 retrograde -314 Oct 10 j 17:47 0°909'29 behind sun begin -320 May 25 j 04:40 28°**8**46'49 -314 Oct 29 j 10:53 30°R∏ behind sun end -320 May 25 j 18:11 28°**8**48'47 opposition -314 Dec 23 j 14:51 28° II 07'08 0°21'11 max. Earth dist. -320 May 24 j 20:05 28°845'32 20.05966 AU min. Earth dist. -314 Dec 24 j 11:13 28°**Д**04'55 17.65577 AU -320 Jun 14 j 22:04 $\Pi^{\circ}0$ direct -313 Mar 08 j 22:31 $26^{\circ}\Pi02'31$ -320 Sep 12 j 20:30 retrograde 3°**Ⅱ**03'18 -313 Jun 21 i 05:03 0ಂತಾ -320 Nov 26 j 14:22 1°**I**01'19 0°-1'-16 -313 Jun 27 j 08:49 opposition max. Earth dist. 0°522'36 19.62967 AU -320 Nov 27 i 03:15 min. Earth dist. 0°**Д**59'56 18.02506 AU -320 Dec 21 j 11:49 -313 Jun 28 j 09:10 30°R8 conjunction 0°9526'19 0°20'39 -319 Feb 09 i 10:41 direct 28°858'54 minimum elong -313 Jun 28 i 09:09 0°926'19 0°20'40 -319 Mar 30 j 10:08 $\Pi^{\circ}0$ retrograde -313 Oct 15 i 16:56 4°9546'48 asc. node -319 Mar 31 j 09:56 0°II02'22 opposition -313 Dec 28 j 09:46 2°9544'28 0°24'42 min. Earth dist. -313 Dec 29 j 06:33 2°542'12 17.60459 AU conjunction -319 May 30 j 09:02 3°II13'42 0°00'35 direct -312 Mar 12 j 20:11 0°939'35 -319 May 30 j 09:02 3°**Ⅱ**13'42 minimum elong 0°00'35 max. Earth dist. -312 Jul 01 j 08:59 5°500'41 19.57987 AU -319 May 30 j 02:16 3°**Ⅱ**12'43 behind sun begin 3°**Ⅱ**14'41 5°504'44 0°23'44 behind sun end -319 May 30 j 15:48 conjunction -312 Jul 02 j 11:19 3°**Ⅱ**11'19 19.99099 AU -319 May 29 j 16:58 minimum elong -312 Jul 02 j 11:19 5°9504'43 0°23'44 max. Earth dist. 7°**Ⅱ**29'57 retrograde -319 Sep 17 j 14:12 retrograde -312 Oct 19 j 14:16 9°925'47 -319 Dec 01 j 04:30 5°**Ⅲ**27'50 0°02'31 -311 Jan 01 j 05:33 opposition opposition 7°**©**23'28 0°28'04 -319 Dec 01 j 18:56 5°**Ⅲ**26'17 17.95709 AU -311 Jan 02 j 04:07 min. Earth dist. min. Earth dist. 7°921'00 17.55635 AU -318 Feb 14 j 02:54 direct 3°**I**I24′59 direct -311 Mar 17 j 16:49 5°9518'19 max. Earth dist. -311 Jul 06 j 11:30 9°5540'36 19.53300 AU -318 Jun 04 j 07:16 conjunction 7°**II**41'19 0°04'03 minimum elong -318 Jun 04 j 07:15 7°**Ⅱ**41'19 0°04'04 conjunction -311 Jul 07 j 14:15 9°544'43 0°26'41 behind sun begin -318 Jun 04 j 00:34 7°**Ⅱ**40'21 -311 Jul 07 j 14:15 9°5544'43 0°26'42 minimum elong behind sun end -318 Jun 04 j 13:57 7°**I**I42'18 retrograde -311 Oct 24 j 14:28 14°9506'16

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -310 in astronomical counting style is the year 311 BCE in historical counting style. 12°903'57 0°31'16 -310 Jan 06 i 01:53 minimum elong -303 Aug 15 j 18:14 17°Ω40'07 0°42'36 opposition min. Earth dist. 17°**Ω**35'48 19.30566 AU -310 Jan 07 i 00:35 12°501'29 17.51091 AU max. Earth dist. -303 Aug 14 j 14:49 -310 Mar 22 j 16:50 9°958'33 -303 Dec 01 j 09:21 22°Ω03'11 direct retrograde -302 Feb 12 j 19:14 20°Ω00'54 0°47'59 opposition 14°526'07 0°29'28 -310 Jul 12 j 17:32 -302 Feb 13 j 17:51 19°**Ω**58'26 17.30411 AU conjunction min. Earth dist. 14°9526'07 -310 Jul 12 j 17:32 0°29'27 -302 Apr 30 j 08:14 minimum elong direct 17°**Ω**54'13 -310 Jul 11 j 13:21 max. Earth dist. 14°9521'46 19.48902 AU -310 Oct 29 j 12:06 -302 Aug 20 j 21:19 22°Ω26'37 0°43'23 retrograde 18°9548'06 conjunction -309 Jan 10 j 23:12 -302 Aug 20 j 21:19 0°43'23 opposition 16°9545'47 0°34'16 minimum elong 22°**Ω**26'37 -302 Aug 19 j 20:09 min. Earth dist. -309 Jan 11 j 23:34 16°543'07 17.46869 AU max. Earth dist. 22°**Ω**22'39 19.30318 AU -302 Dec 06 j 09:25 direct -309 Mar 27 j 15:08 14°9540'07 retrograde 26°**Ω**49'34 -301 Feb 17 j 20:35 0°48'42 opposition 24°**Ω**47'24 -309 Jul 17 j 20:55 -301 Feb 18 j 18:47 conjunction 19°508'44 0°32'03 min. Earth dist. 24°**Ω**44'59 17.30484 AU -309 Jul 17 j 20:55 minimum elong 19°**©**08'44 0°32'04 direct -301 May 05 j 10:34 22°**Ω**40'49 max. Earth dist. -309 Jul 16 j 16:20 19°**©**04'18 19.44851 AU retrograde -309 Nov 03 j 12:42 23°931'06 conjunction -301 Aug 25 j 23:44 27°Ω13'12 0°43'53 opposition -308 Jan 15 j 21:00 21°**©**28'45 0°37'03 minimum elong -301 Aug 25 j 23:44 27°Ω13'12 0°43'54 min. Earth dist. -308 Jan 16 j 20:56 21°**©**26'08 17.43002 AU max. Earth dist. -301 Aug 24 j 22:44 27°**Ω**09'15 19.30720 AU direct -308 Mar 31 j 17:02 19°522'51 -301 Oct 12 j 09:45 0° m max. Earth dist. -308 Jul 20 j 19:36 23°547'53 19.41177 AU retrograde -301 Dec 11 j 10:21 1° m 36'00 -300 Feb 12 j 20:09 30°R€ conjunction -308 Jul 22 i 00:36 23°952'24 0°34'26 opposition -300 Feb 22 i 22:08 29° Ω33'58 0°49'06 minimum elong -308 Jul 22 j 00:36 23°952'24 0°34'27 min. Earth dist. -300 Feb 23 i 18:56 29° Ω31'43 17.31196 AU retrograde -308 Nov 07 j 10:23 28°9515'03 direct -300 May 09 j 13:53 27°**Ω**27'30 opposition -307 Jan 19 i 19:25 26°9512'41 0°39'36 -300 Jul 28 i 09:25 0° m min. Earth dist. -307 Jan 20 i 20:45 26°909'55 17.39552 AU max. Earth dist. -300 Aug 29 j 03:33 1° m 56'11 19.31726 AU -307 Apr 05 j 16:45 24°906'33 direct max. Earth dist. -307 Jul 25 j 22:55 28°532'19 19.37956 AU -300 Aug 30 j 02:08 1° **m** 59'45 0°44'05 conjunction -300 Aug 30 j 02:08 1° m 59'45 0°44'05 minimum elong -307 Jul 27 j 04:21 -300 Dec 15 j 10:47 6° m 22'18 conjunction 28°\$36'54 0°36'36 retrograde -307 Jul 27 j 04:21 -299 Feb 26 j 23:53 4° Tp 20'26 0°49'09 minimum elong 28°936'54 0°36'36 opposition -307 Aug 18 j 16:24 -299 Feb 27 j 19:55 4° ነው 18'16 17.32471 AU 0 $^{\circ}\Omega$ min. Earth dist. -307 Nov 12 j 11:08 2°**Q**59'46 -299 May 14 j 16:59 retrograde direct 2° My 14'08-306 Jan 24 j 18:21 max. Earth dist. -299 Sep 03 j 05:41 0°Ω57'23 0°41'52 6° Mp 42'35 19.33274 AU opposition -306 Jan 25 j 18:50 0°**Ω**54'42 17.36566 AU min. Earth dist. -306 Feb 16 j 11:36 -299 Sep 04 j 04:01 6° To 46'06 0°43'59 30°R∽ conjunction -306 Apr 10 j 20:31 28°951'03 -299 Sep 04 j 04:01 6° Mp 46′06 direct minimum elong 0°43'59 -306 Jun 01 j 18:59 $0^{\circ}\Omega$ retrograde -299 Dec 20 j 10:48 11° Mp 08'22max. Earth dist. -306 Jul 31 j 03:21 3°**Ω**17'35 19.35216 AU opposition -298 Mar 04 j 02:01 9°**™**06'37 0°48'52 9° mg 04'34 17.34280 AU min. Earth dist. -298 Mar 04 j 20:57 conjunction -306 Aug 01 j 08:07 3°**Ω**22'05 0°38'30 direct -298 May 19 j 20:48 7° m 00'30 minimum elong -306 Aug 01 j 08:06 3°**Q**22'05 0°38'31 max. Earth dist. -298 Sep 08 j 09:27 11° m/28'52 19.35326 AU -306 Nov 17 j 08:57 7°**Ω**45′06 retrograde -305 Jan 29 j 17:59 5°**Ω**42'42 0°43'52 -298 Sep 09 j 05:25 11° **m** 32'01 0°43'35 opposition conjunction min. Earth dist. -305 Jan 30 j 19:18 5°**Ω**39'56 17.34103 AU -298 Sep 09 j 05:25 11° Mp 32'01 0°43'35 minimum elong -298 Dec 25 i 10:37 direct -305 Apr 15 j 21:48 3°**Ω**36'12 retrograde 15° m 53'53 -297 Mar 09 i 04:19 max. Earth dist. -305 Aug 05 i 06:40 8°Ω03'13 19.33044 AU opposition 13° m 52'17 0°48'14 -297 Mar 09 i 21:50 min. Earth dist. 13° m 50'24 17.36552 AU -305 Aug 06 j 11:38 8°Ω07'46 0°40'08 conjunction direct -297 May 25 i 01:21 11° m 46'23 minimum elong -305 Aug 06 i 11:38 8°Ω07'46 0°40'08 max. Earth dist. -297 Sep 13 j 10:56 16° m 14'15 19.37827 AU -305 Nov 22 i 09:40 retrograde 12°Ω30'52 -304 Feb 03 i 17:55 10°Ω28'28 0°45'33 conjunction -297 Sep 14 j 06:13 16° m 17'18 0°42'52 opposition min. Earth dist. -304 Feb 04 j 17:54 10°**Ω**25'51 17.32234 AU minimum elong -297 Sep 14 j 06:13 16° m) 17'18 0°42'52 -297 Dec 30 j 09:20 direct -304 Apr 20 j 02:10 8°**Ω**21'50 retrograde 20° m 38'43 max. Earth dist. -304 Aug 09 j 11:45 12°**Ω**49'31 19.31478 AU opposition -296 Mar 13 j 06:33 18° m 37'12 0°47'17 min. Earth dist. -296 Mar 13 j 23:10 18° m 35'25 17.39277 AU conjunction -304 Aug 10 j 15:03 12°Ω53'48 0°41'31 direct -296 May 29 j 05:00 16° Mp 31'30 -304 Aug 10 j 15:03 12°**Ω**53'48 0°41'31 minimum elong -304 Sep 14 j 08:38 15°**Ω** -296 Sep 18 j 06:27 21° Mp 01'42 0°41'53 conjunction -304 Nov 26 j 08:32 17°**Ω**16'55 -296 Sep 18 j 06:27 21° Mp 01'42retrograde minimum elong 0°41'53 -303 Feb 07 j 18:29 15°**Ω**14'33 0°46'55 -296 Sep 17 j 13:14 20° m 58'59 19.40761 AU opposition max. Earth dist. -303 Feb 08 j 18:38 min. Earth dist. 15°**Ω**11'55 17.30989 AU retrograde -295 Jan 03 j 08:26 25° m 22'34 -303 Feb 13 j 08:11 15°RΩ opposition -295 Mar 18 j 08:45 23° m 21'10 0°46'01 direct -303 Apr 25 j 04:22 13°**Ω**07'53 min. Earth dist. -295 Mar 18 j 23:25 23° Mp 19'36 17.42393 AU -303 Jul 01 j 12:17 15°**Ω** direct -295 Jun 03 j 10:09 21° Mp 15^\prime 42 -303 Aug 15 j 18:14 17°**Ω**40'07 0°42'36 -295 Sep 23 j 05:54 25° m/45'01 0°40'36 conjunction conjunction

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Earth dist. 4°**ጤ**50'29 17.88167 AU -294 Sep 21 j 00:35 -286 Jul 16 j 18:02 0∘ଫ direct 2°M47'44 7° ML 05'18 0° 19'08 conjunction -294 Sep 28 j 04:35 0°**2**27'03 0°39'03 conjunction -286 Nov 03 j 09:30 -294 Sep 28 j 04:35 0°39'03 minimum elong -286 Nov 03 j 09:30 0°19'09 minimum elong 0°**₽**27'03 7°ML05'17 -294 Sep 27 j 14:36 max. Earth dist. -286 Nov 03 j 12:55 max. Earth dist. 0°**£**24'51 19.47791 AU 7°M05'49 19.91517 AU -293 Jan 13 j 04:24 -285 Feb 18 j 17:47 retrograde 4°**£**46'42 retrograde 11°M18'49 -293 Mar 28 j 12:42 opposition 2°**£**45'27 0°42'33 opposition -285 May 05 j 11:59 9°**M**₁8'35 0°19'31 min. Earth dist. -293 Mar 29 j 00:00 2°**£**44'15 17.49800 AU min. Earth dist. -285 May 05 j 06:38 9°**M**₁9'09 17.94862 AU direct -293 Jun 13 j 17:26 0°**£**40'27 direct -285 Jul 21 j 16:34 7°M16'34 conjunction -293 Oct 03 j 02:16 5°**♀**07'38 0°37'15 conjunction -285 Nov 08 j 00:22 11°ML32'37 0°16'00 11°M32'37 minimum elong -293 Oct 03 j 02:16 5°**≏**07'38 0°37'15 minimum elong -285 Nov 08 j 00:22 0°15'59 max. Earth dist. -293 Oct 02 j 14:21 5°**Ω**05'46 19.51885 AU behind sun begin -285 Nov 07 j 23:06 11°M32'26 retrograde -292 Jan 18 j 00:40 9°**£**26'35 behind sun end -285 Nov 08 j 01:38 11°M32'49 opposition -292 Apr 01 j 14:17 7°**£**25'23 0°40'24 max. Earth dist. -285 Nov 08 i 06:50 11°M33'36 19.98261 AU min. Earth dist. -292 Apr 02 j 00:43 7°**£**24'17 17.54093 AU -284 Jan 12 j 17:26 15°M direct -292 Jun 17 j 18:53 5°**£**20'38 retrograde -284 Feb 23 j 10:23 15°M45'20 -284 Apr 06 i 18:20 15°RML -292 Oct 06 j 23:06 9°**£**46'36 0°35'12 opposition -284 May 09 j 09:33 13°ML45'17 0°15'58 conjunction minimum elong -292 Oct 06 j 23:06 9°**£**46'36 0°35'12 min. Earth dist. -284 May 09 j 03:05 13°ML45'57 18.01637 AU max. Earth dist. -292 Oct 06 j 13:03 9°**2**45'02 19.56387 AU direct -284 Jul 25 j 13:10 11°ML43'43 -291 Jan 21 j 22:19 -284 Oct 26 j 15:15 retrograde 14°<u>₽</u>04'48 15°M -291 Apr 06 j 15:13 12°**2**03'41 0°37'59 opposition -291 Apr 06 j 22:40 min. Earth dist. 12°**♀**02'54 17.58789 AU -284 Nov 11 j 14:20 15°M58'13 0°12'47 conjunction -291 Jun 22 j 22:08 9°**£**59'12 -284 Nov 11 j 14:20 direct minimum elong 15°M58'13 0°12'46 -284 Nov 11 j 10:08 behind sun begin 15°M57'36 -284 Nov 11 j 18:31 -291 Oct 11 j 19:06 14°**2**23'54 0°32'57 behind sun end 15°M58'51 conjunction -291 Oct 11 j 19:06 14°**2**23'54 0°32'57 max. Earth dist. -284 Nov 11 j 21:34 15°M59'19 20.05055 AU minimum elong -291 Oct 11 j 11:46 14°**£**22'45 19.61295 AU -283 Feb 27 j 03:24 max. Earth dist. retrograde 20°M10'08 retrograde -290 Jan 26 j 17:24 18°**≏**41'20 opposition -283 May 14 j 06:23 18°ML10'13 0°12'21 opposition -290 Apr 11 j 16:05 16°**♀**40'19 0°35'22 min. Earth dist. -283 May 13 j 21:35 18°ML11'08 18.08434 AU -283 Jul 30 j 09:56 min. Earth dist. -290 Apr 11 j 22:22 16°**೨**39'39 17.63913 AU direct 16°ML09'05 direct -290 Jun 27 j 21:48 14°**△**36'09 conjunction -283 Nov 16 j 03:45 20°M22'04 0°09'31 conjunction -290 Oct 16 j 13:59 18°**♀**59'29 0°30'30 minimum elong -283 Nov 16 j 03:45 20°M22'04 0°09'30 minimum elong -290 Oct 16 j 13:59 18°**≏**59'29 0°30'29 behind sun begin -283 Nov 15 j 22:15 20°M21'15 max. Earth dist. -290 Oct 16 j 08:28 18°**♀**58'37 19.66641 AU behind sun end -283 Nov 16 j 09:14 20°M22'53 -289 Jan 31 j 14:36 -283 Nov 16 j 13:48 20°M23'35 20.11828 AU retrograde 23°**2**16'09 max. Earth dist. -289 Apr 16 j 16:17 -282 Mar 03 j 18:56 opposition 21°**2**15'14 0°32'31 retrograde 24°MJ33'09 -289 Apr 16 j 19:14 min. Earth dist. 21°**2**14'56 17.69460 AU opposition -282 May 19 j 02:44 22°M33'22 0°08'40 -289 Jul 02 j 23:17 direct 19°**£**11'27 min. Earth dist. -282 May 18 j 16:42 22°M34'23 18.15170 AU direct -282 Aug 04 j 05:39 20°MJ32'37 -289 Oct 21 i 08:13 conjunction 23°**△**33'23 0°27'53 conjunction minimum elong -289 Oct 21 i 08:13 23°**₽**33'23 0°27'53 -282 Nov 20 i 16:07 24°M44'02 0°06'13 minimum elong max. Earth dist. -289 Oct 21 j 05:49 23°**△**33'01 19.72389 AU -282 Nov 20 j 16:08 24°M44'02 0°06'12 -288 Feb 05 i 08:47 -282 Nov 20 i 09:55 retrograde 27°**₽**49'16 behind sun begin 24°ML43'07 -282 Nov 20 j 22:20 -288 Apr 20 j 15:58 opposition 25°**≏**48'31 0°29'30 behind sun end 24°M44'58 -288 Apr 20 j 17:44 min. Earth dist. 25°**♀**48'20 17.75395 AU max. Earth dist. -282 Nov 21 j 02:43 24°M45'38 20.18519 AU -288 Jul 06 j 21:07 direct 23°**£**45′08 retrograde -281 Mar 08 j 09:53 28°M54'20 opposition -281 May 23 j 22:17 26°M54'38 0°04'59 -288 Oct 25 j 01:29 28°**♀**05'39 0°25'06 min. Earth dist. -281 May 23 j 10:22 26°M55'50 18.21808 AU conjunction -288 Oct 25 j 01:29 28°**♀**05'39 0°25'06 direct -281 Aug 09 j 00:09 24° M $_{5}4'14$ minimum elong max. Earth dist. -288 Oct 25 j 00:30 28°**♀**05'30 19.78505 AU -288 Nov 25 j 19:25 0°M conjunction -281 Nov 25 j 04:03 29°MJ04'08 0°02'53 retrograde -287 Feb 09 j 05:08 2°M20'45 minimum elong -281 Nov 25 j 04:02 29°ML04'08 0°02'53 opposition -287 Apr 25 j 15:06 0°M20'10 0°26'18 behind sun begin -281 Nov 24 j 21:31 29°ML03'10 min. Earth dist. -287 Apr 25 j 13:44 0°**M**-20'19 17.81657 AU behind sun end -281 Nov 25 j 10:33 29°M05'05

max. Earth dist.

-281 Nov 25 j 17:11

-281 Dec 10 j 15:29

29°M 06'07 20.25081 AU

0°**∡**7

-287 May 03 j 17:49

-287 Jul 11 j 21:02

direct

30°**Ŗ**Ω

28°**♀**17'14

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Earth dist. 0°**∡** 0°**ප**38'01 -280 Sep 24 j 10:09 -273 Jun 28 j 06:31 0°-22'-54 opposition -280 Oct 03 j 03:41 0°**х** 19'58 -273 Jul 14 j 08:03 desc. node 30°₽**⋌** 28°**х** 40′06 direct -273 Sep 12 j 17:34 -280 Nov 28 j 14:57 -273 Nov 08 j 18:40 0°ರ conjunction 3°**х** 22'15 0°00'-31 -280 Nov 28 j 14:57 minimum elong 3°**х** 22′15 0°00'32 3°**∡**¹21'18 -280 Nov 28 j 08:26 behind sun begin conjunction -273 Dec 28 j 01:06 2°る39'17 0°-22'-5 -280 Nov 28 j 21:28 -273 Dec 28 j 01:06 2°**る**39'17 0°22'06 behind sun end 3°**х**⁴23′13 minimum elong -280 Nov 29 j 04:32 -273 Dec 29 j 01:43 2°る42'54 20.72833 AU max. Earth dist. 3°**尽**24'18 20.31491 AU max. Earth dist. retrograde -279 Mar 16 j 13:25 7°**х¹**30'55 retrograde -272 Apr 14 j 23:29 6°**る**43'25 opposition -279 Jun 01 j 10:53 5°**∡**³31'18 0°-2'-23 opposition -272 Jul 01 j 19:11 4°**ප**44'14 0°-25'-56 min. Earth dist. -279 May 31 j 20:10 5°**∡**³32'48 18.34636 AU min. Earth dist. -272 Jun 30 j 18:53 4°る46'40 18.75460 AU direct -279 Aug 17 j 10:27 3°**х**³31'32 direct -272 Sep 16 j 05:12 2°**る**46'38 conjunction -279 Dec 03 j 01:07 7°**∡**³38'24 0°-3'-51 conjunction -272 Dec 31 j 07:31 6°**る**44'48 0°-24'-46 minimum elong -279 Dec 03 j 01:06 7°**∡**³38'24 0°03'52 minimum elong -272 Dec 31 j 07:31 6°**る**44'48 0°24'46 behind sun begin -279 Dec 02 j 18:38 7°**∡**³37'27 max. Earth dist. -271 Jan 01 j 08:11 6°る48'25 20.77974 AU behind sun end -279 Dec 03 i 07:34 7°**х** 39′20 retrograde -271 Apr 19 i 09:35 10°る48'30 max. Earth dist. -279 Dec 03 i 17:23 7°**х** 40'50 20.37764 AU min. Earth dist. -271 Jul 05 i 07:19 8°る51'51 18.80450 AU retrograde -278 Mar 21 j 02:11 11°**∡**¹46′16 opposition -271 Jul 06 i 07:37 8°る49'25 0°-28'-49 min. Earth dist. -278 Jun 05 j 11:44 9°**∡**748'20 18.40844 AU direct -271 Sep 20 j 13:26 6°る52'06 -278 Jun 06 j 04:06 9°**х** 46'41 0°-6'00 opposition -278 Aug 22 j 02:37 7°**х** 47′12 conjunction -270 Jan 04 j 13:45 10°る49'20 0°-27'-18 direct minimum elong -270 Jan 04 j 13:45 10°る49'20 0°27'20 -278 Dec 07 j 10:28 11°**∡** 52'36 0°-7'-5 max. Earth dist. -270 Jan 05 j 15:59 10°る53'10 20.82779 AU conjunction -278 Dec 07 j 10:28 -270 Apr 23 j 20:18 14°**る**52'38 11°**∡**′52'36 0°07'07 retrograde minimum elong -278 Dec 07 j 04:25 -270 Jul 10 j 19:18 11°**х** 51'43 opposition 12°る53'38 0°-31'-33 behind sun begin -270 Jul 09 j 17:51 -278 Dec 07 j 16:31 min. Earth dist. 12°る56'11 18.85057 AU behind sun end 11°**х** 53′29 -270 Sep 25 j 00:09 -278 Dec 08 j 03:22 20.43916 AU max. Earth dist. 11°**∡**′55'07 direct 10°**る**56'35 -277 Mar 25 j 14:40 15°**₹**59'44 retrograde -277 Jun 10 j 20:23 -269 Jan 08 j 19:45 14°る52'57 0°-29'-43 14° \$\square\$ 00'09 0°-9'-34 opposition conjunction -277 Jun 10 j 02:40 -269 Jan 08 j 19:45 14°**₰**01'57 18.46960 AU 14°る52'57 0°29'43 min. Earth dist. minimum elong -269 Jan 09 j 21:33 14°る56'43 20.87167 AU -277 Aug 26 j 16:40 12°**х** 00′57 direct max. Earth dist. retrograde -269 Apr 28 j 05:52 18°**る**55'54 conjunction -277 Dec 11 j 19:20 16°**₹**04'58 0°-10'-15 min. Earth dist. -269 Jul 14 j 05:35 16°る59'26 18.89233 AU minimum elong -277 Dec 11 j 19:20 16°**∡**¹04'58 0°10'16 opposition -269 Jul 15 j 06:24 16°**る**56'57 0°-34'-7 behind sun begin -277 Dec 11 j 14:06 16°**₹**'04'13 direct -269 Sep 29 j 07:18 15°る00'07 behind sun end -277 Dec 12 j 00:34 16°**₹**05'44 max. Earth dist. -277 Dec 12 j 14:46 16°**₹**07'52 20.49974 AU conjunction -268 Jan 13 j 01:43 18°る55'42 0°-31'-57 retrograde -276 Mar 29 j 02:32 20°**х** 11′23 minimum elong -268 Jan 13 j 01:43 18°る55'42 0°31'58 -276 Jun 14 j 11:54 18°**≯**11'52 0°-13'-3 max. Earth dist. -268 Jan 14 j 04:28 18°る59'35 20.91099 AU opposition -268 May 01 j 15:48 22°る58'19 min. Earth dist. -276 Jun 13 j 16:22 18° ₹ 13'50 18.52963 AU retrograde -268 Jul 18 i 16:57 20°る59'23 0°-36'-30 direct -276 Aug 30 i 06:48 16°**∡**12'58 opposition -268 Jul 17 i 15:12 21°る01'57 18.92912 AU min. Earth dist. -276 Dec 15 i 03:22 20° **х** 15'39 0°-13'-21 -268 Oct 02 j 17:11 conjunction direct 19°る02'44 -276 Dec 15 i 03:22 minimum elong 20°**х** 15′39 0°13'23 behind sun begin -276 Dec 14 j 23:31 20°**₹**15'06 conjunction -267 Jan 16 i 07:11 22°る57'34 0°-34'-2 behind sun end -276 Dec 15 j 07:13 20°**х** 16′13 minimum elong -267 Jan 16 i 07:11 22°る57'34 0°34'03 max. Earth dist. -276 Dec 15 j 23:20 20° ₹ 18'37 20.55920 AU max. Earth dist. -267 Jan 17 j 09:14 23°る01'20 20.94522 AU -267 May 06 j 01:02 -275 Apr 02 j 14:10 24°×721'26 26°る59'54 retrograde retrograde -275 Jun 18 j 06:12 22°**∡**′24′02 18.58863 AU -267 Jul 22 j 02:17 25°る03'25 18.96092 AU min. Earth dist. min. Earth dist. -275 Jun 19 j 02:49 opposition 22°**х** 21′58 0°-16'-27 opposition -267 Jul 23 j 03:10 25°**る**00'56 0°-38'-42 direct -275 Sep 03 j 18:53 20°**х** 23′24 direct -267 Oct 06 j 23:50 23°る04'24 0°-16'-22 -275 Dec 19 j 11:07 24°**₹**'24'50 conjunction -266 Jan 20 j 12:44 26°る58'34 0°-35'-56 conjunction -275 Dec 19 j 11:06 24°**×**⁷24'50 0°16'23 minimum elong -266 Jan 20 j 12:44 26°る58'34 0°35'57 minimum elong -275 Dec 20 j 09:26 24°**✗**28'08 20.61748 AU max. Earth dist. -266 Jan 21 j 15:35 27°る02'27 20.97455 AU max. Earth dist. -274 Apr 07 j 01:38 -266 Mar 20 j 16:11 retrograde 28°**₹**30'01 0°≈ opposition -274 Jun 23 j 16:56 26°**₹**30'38 0°-19'-44 retrograde -266 May 10 j 09:55 1°≈00'37 min. Earth dist. -274 Jun 22 j 18:34 26°**∡**32'53 18.64609 AU -266 Jul 02 j 01:06 30°Ŗる direct -274 Sep 08 j 07:38 24°×32'23 min. Earth dist. -266 Jul 26 j 10:51 29°る04'10 18.98779 AU -266 Jul 27 j 12:35 29°**る**01'36 0°-40'-42 opposition -274 Dec 23 j 18:11 28°**₹**32'39 0°-19'-17 direct -266 Oct 11 j 08:38 27°る05'09 conjunction

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Attention, astronom		ne year -265 i 0°≈	n astronomicai cou		266 BCE in historical co	0°) (49'03	0°-48'-50
	-265 Jan 07 j 14:53	0 ~		opposition	-258 Aug 29 j 01:47	0 / (4903 30°R ≈	0 -46 -30
:	265 1 24: 17.56	000 050142	09 271 20	J: 4	-258 Sep 18 j 23:36	30°k≈ 28°≈52'47	
conjunction	-265 Jan 24 j 17:56	0°≈58'43		direct	-258 Nov 12 j 05:59	28°≈32'47 0°) €	
minimum elong	-265 Jan 24 j 17:56	0°≈58'43			-257 Jan 03 j 06:23	υ π	
max. Earth dist.	-265 Jan 25 j 20:01		20.99909 AU		257 F 1 25 : 12 27	201/44/50	00 441 14
retrograde	-265 May 14 j 18:22	5°≈00'33	00 421 20	conjunction	-257 Feb 25 j 13:37	2°) (44'58	
opposition	-265 Jul 31 j 21:38		0°-42'-29	minimum elong	-257 Feb 25 j 13:37	2°) (44'58	0°44'15 21.05716 AU
min. Earth dist.	-265 Jul 30 j 20:55		19.01021 AU	max. Earth dist.	-257 Feb 26 j 13:15	6°) (47'10	21.03/16 AU
direct	-265 Oct 15 j 14:42	1°≈05'02		retrograde	-257 Jun 16 j 10:46 -257 Sep 01 j 11:45		19.05255 AU
:	-264 Jan 28 j 23:07	100 050105	0°-39'-10	min. Earth dist.	-257 Sep 01 j 11:45 -257 Sep 02 j 08:35		19.05255 AU 0°-48'-50
conjunction minimum elong	-264 Jan 28 j 23:07	4°≈58'05 4°≈58'05	0°39'11	opposition	1 0	2° ₩51'21	0 -48 -30
max. Earth dist.	-264 Jan 30 j 02:00		21.01939 AU	direct	-257 Nov 16 j 09:24	2 X 3121	
	-264 May 18 j 02:47	8°≈59'45	21.01939 AU	conjunction	-256 Feb 29 j 20:23	6°){ 43'47	0°-44'-8
retrograde min. Earth dist.	, ,		19.02849 AU	minimum elong	-256 Feb 29 j 20:23	6° X 43'47	
	-264 Aug 03 j 04:22			Č	•		0°44'09 21.04577 AU
opposition	-264 Aug 04 j 05:58	7°≈00'33	0°-44'-3	max. Earth dist.	-256 Mar 01 j 19:30		21.045// AU
direct	-264 Oct 18 j 22:03	5° ≈ 04'11		retrograde	-256 Jun 19 j 20:37	10°) 46'17	00 401 26
	262 E 1 01 : 04 00	00 7 (140	00 401 20	opposition	-256 Sep 05 j 15:12		0°-48'-36
conjunction	-263 Feb 01 j 04:08	8°≈56'49	0°-40'-30	min. Earth dist.	-256 Sep 04 j 18:33		19.03847 AU
minimum elong	-263 Feb 01 j 04:07	8°≈56'49	0°40'32	direct	-256 Nov 19 j 15:37	6° ¥ 50′21	
max. Earth dist.	-263 Feb 02 j 06:19		21.03577 AU				
retrograde	-263 May 22 j 10:07	12°≈58'22	00.451.04	conjunction	-255 Mar 05 j 03:35	10°) (43′08	
opposition	-263 Aug 08 j 14:08	10°≈59'05		minimum elong	-255 Mar 05 j 03:35	10°) (43′08	
min. Earth dist.	-263 Aug 07 j 13:35		19.04317 AU	max. Earth dist.	-255 Mar 06 j 00:38		21.02900 AU
direct	-263 Oct 23 j 03:34	9° ≈ 02'45		retrograde	-255 Jun 24 j 04:37	14°) (45'59	
				opposition	-255 Sep 09 j 21:58	12°) (46′20	
conjunction	-262 Feb 05 j 09:15	12°≈55'03		min. Earth dist.	-255 Sep 09 j 03:43		19.01898 AU
minimum elong	-262 Feb 05 j 09:15	12°≈55'03	0°41'38	direct	-255 Nov 23 j 19:29	10°) 49′50	
max. Earth dist.	-262 Feb 06 j 12:09		21.04868 AU				
	-262 Mar 15 j 13:14	15° ≈		conjunction	-254 Mar 09 j 11:21	14°) 43′03	0°-43'-17
retrograde	-262 May 26 j 19:09	16° ≈ 56'33		minimum elong	-254 Mar 09 j 11:21	14°) 43′03	
	-262 Aug 11 j 17:54	15°R≈		max. Earth dist.	-254 Mar 10 j 07:29		21.00684 AU
opposition	-262 Aug 12 j 21:44	14° ≈ 57'12		retrograde	-254 Jun 28 j 14:35	18°) 46′15	
min. Earth dist.	-262 Aug 11 j 20:24		19.05426 AU	min. Earth dist.	-254 Sep 13 j 10:46		18.99396 AU
direct	-262 Oct 27 j 09:56	13° ≈ 00'53		opposition	-254 Sep 14 j 04:34	16°) 46′30	0°-47'-26
	-261 Jan 06 j 08:22	15° ≈		direct	-254 Nov 28 j 01:57	14°) (49′50	
conjunction	-261 Feb 09 j 14:26	16°≈52'58		conjunction	-253 Mar 13 j 19:31	18°) 43′31	
minimum elong	-261 Feb 09 j 14:26	16°≈52'58		minimum elong	-253 Mar 13 j 19:31	18°) (43′31	
max. Earth dist.	-261 Feb 10 j 16:25		21.05796 AU	max. Earth dist.	-253 Mar 14 j 13:25		20.97916 AU
retrograde	-261 May 31 j 01:45	20°≈54'29	10.06100 177	retrograde	-253 Jul 02 j 22:48	22°) (47'08	00 46 20
min. Earth dist.	-261 Aug 16 j 05:06		19.06182 AU	opposition	-253 Sep 18 j 11:12	20°) (47'14	
opposition	-261 Aug 17 j 05:02	18°≈55'06	0°-47'-27	min. Earth dist.	-253 Sep 17 j 19:55		18.96376 AU
direct	-261 Oct 31 j 14:21	16° ≈ 58'48		direct	-253 Dec 02 j 06:21	18° ¥ 50′21	
aaniumatian	260 Eab. 12 : 10:52	20% 250146	0°-43'-17	aaniumatian	252 Mar. 17 ; 04:10	22°) (44'37	0°-41'-34
conjunction minimum elong	-260 Feb 13 j 19:53 -260 Feb 13 j 19:53	20°≈50'46 20°≈50'46		conjunction minimum elong	-252 Mar 17 j 04:10 -252 Mar 17 j 04:10	22°)(44'37	0°41'35
max. Earth dist.	-260 Feb 14 j 22:15		21.06374 AU	max. Earth dist.	-252 Mar 17 j 21:06		20.94674 AU
retrograde	-260 Jun 03 j 11:07	20 ≈54 32 24°≈52'21	21.00374 AU	retrograde	-252 Jul 06 j 08:53	26° H 48'39	20.94074 AU
min. Earth dist.	-260 Aug 19 j 11:35		19.06568 AU	opposition	-252 Sep 21 j 17:47	24°) (48'36	0° 45' 10
opposition	-260 Aug 20 j 12:04	22 ≈53 23 22°≈52'55		min. Earth dist.	-252 Sep 21 j 17.47 -252 Sep 21 j 02:55		18.92905 AU
direct	-260 Nov 03 j 20:23	22 ≈32 33 20°≈56'39	0 -46 -6	direct	-252 Sep 21 j 02.33 -252 Dec 05 j 13:03	24 X 30 0 7 22° X 51'29	18.92903 AU
direct	-200 NOV 03 J 20.23	20 ~30 39		direct	-232 Dec 03 j 13.03	22 1 31 29	
conjunction	-259 Feb 17 j 01:16	24° ≈ 48'35	0°-43'-48	conjunction	-251 Mar 21 j 13:06	26°) 46′23	0°-40'-24
minimum elong	-259 Feb 17 j 01:17	24°≈48'35		minimum elong	-251 Mar 21 j 13:06	26°\(\)46'23	0°40'25
max. Earth dist.	-259 Feb 18 j 02:32		21.06569 AU	max. Earth dist.	-251 Mar 22 j 04:05		20.91000 AU
retrograde	-259 Jun 07 j 17:50	28°≈50'19	21.00007710	Durin dist.	-251 May 25 j 11:28	20 γ(4 031	_0., 1000 110
opposition	-259 Aug 24 j 19:09	26°≈50'52	0°-48'-36	retrograde	-251 Jul 10 j 17:28	0°Υ50'56	
min. Earth dist.	-259 Aug 23 j 20:18		19.06568 AU	1011001440	-251 Aug 26 j 23:30	30°R) €	
direct	-259 Nov 07 j 23:57	24°≈54'36	27.00000710	opposition	-251 Sep 26 j 00:39	28°) 50'42	0°-43'-55
	20, 1.01 01 j 25.51			min. Earth dist.	-251 Sep 25 j 12:12		18.89043 AU
conjunction	-258 Feb 21 j 07:19	28° ≈ 46'36	0°-44'-7	direct	-251 Dec 09 j 17:46	26° H 53'20	10.07043 AU
minimum elong	-258 Feb 21 j 07:19	28°≈46'36		uncot	-250 Mar 11 j 14:33	20 γ (33 20	
max. Earth dist.	-258 Feb 22 j 08:35		21.06369 AU		250 1.101 11 1 17.55	V 1	
max. Luttii Uist.	-258 Mar 15 j 01:40	28 ≈ 30 12 0° ∺	21.00307 AU	conjunction	-250 Mar 25 j 22:52	0° Υ 48'58	0°-39'-1
retrograde	-258 Jun 12 j 03:27	2°) (48'32		minimum elong	-250 Mar 25 j 22:52	0° Υ 48'58	0°39'02
min. Earth dist.	-258 Aug 28 j 02:50		19.06145 AU	max. Earth dist.	-250 Mar 26 j 12:48		20.86975 AU
UIDL.	200 . 145 20 J 02.30	J 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-2.001 10 /10	Lain aist.	200ui 20 j 1210	0 1 20 20	_0.007,0110

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 11 Attention, astronomical year style is used: The year -250 in astronomical counting style is the year 251 BCE in historical counting style. -250 Jul 15 i 04:22 4°Υ′54'02 retrograde retrograde -242 Aug 18 i 08:53 8°806'04 -250 Sep 30 i 07:18 opposition 2°Y53'39 0°-42'-17 opposition -242 Nov 02 i 02:07 6°804'55 0°-22'-5 min. Earth dist. -250 Sep 29 i 19:19 2°Υ54'53 18.84850 AU min. Earth dist. -242 Nov 02 j 03:32 6°804'46 18.42579 AU -250 Dec 14 j 00:50 0°Y56'01 -241 Jan 15 j 15:34 4°805'01 direct direct 4°**Υ**52'29 0°-37'-27 -249 Mar 30 j 09:08 -241 May 03 j 23:03 8°810'54 0°-18'-28 conjunction conjunction -249 Mar 30 j 09:08 4°**Υ**52'29 -241 May 03 j 23:03 8°810'54 0°18'29 minimum elong 0°37'28 minimum elong -249 Mar 30 j 21:03 4°Υ54'11 20.82629 AU -241 May 03 j 19:32 8°810'24 20.39421 AU max. Earth dist. max. Earth dist. 8° Y58'08-249 Jul 19 j 13:36 -241 Aug 22 j 22:44 12°**8**22'27 retrograde retrograde opposition -249 Oct 04 j 14:27 6°**Υ**'57'36 0°-40'-27 opposition -241 Nov 06 j 12:50 10°**8**21'10 0°-18'-46 min. Earth dist. -249 Oct 04 j 04:51 6°**Υ**58'36 18.80368 AU min. Earth dist. -241 Nov 06 j 16:56 10°**8**20'44 18.36179 AU -249 Dec 18 j 06:00 4°Υ59'42 -240 Jan 20 j 01:32 8°**8**20'54 direct direct -248 Apr 02 j 19:56 conjunction 8°**Υ**57'05 0°-35'-41 conjunction -240 May 07 j 16:29 12°**8**28'10 0°-15'-25 -248 Apr 02 j 19:56 minimum elong 8°**Y**57'05 0°35'42 minimum elong -240 May 07 j 16:29 12°**8**28'10 0°15'26 -248 Apr 03 j 06:43 max. Earth dist. 8°**Υ**58'37 20.78028 AU behind sun begin -240 May 07 j 15:06 12°**8**27'58 -248 Jul 23 j 01:38 retrograde 13°Y03'21 behind sun end -240 May 07 j 17:51 12°**8**28'22 opposition -248 Oct 07 j 21:43 11°**Y**02'42 0°-38'-24 max. Earth dist. -240 May 07 j 10:18 12°**8**27'16 20.32921 AU min. Earth dist. -248 Oct 07 j 12:32 11°**Y**03'39 18.75641 AU -240 Jun 22 j 17:50 15°8 direct -248 Dec 21 j 13:22 9°Y04'32 retrograde -240 Aug 26 j 15:08 16°**8**40'31 -240 Nov 01 j 17:48 15°R\ conjunction -247 Apr 07 i 07:31 13°Υ02'54 0°-33'-44 opposition -240 Nov 09 i 23:57 14°839'04 0°-15'-20 minimum elong -247 Apr 07 i 07:31 13°Υ02'54 0°33'46 min. Earth dist. -240 Nov 10 i 05:16 14°**8**38'30 18.29576 AU max. Earth dist. -247 Apr 07 j 16:20 13°**Y**04'10 20.73187 AU direct -239 Jan 23 j 14:50 12°838'22 retrograde -247 Jul 27 j 12:16 17°**Y**09'51 -239 Apr 11 j 05:03 15°₩ opposition -247 Oct 12 i 05:24 15°**Y**09'06 0°-36'-9 min. Earth dist. -247 Oct 11 j 22:39 15°**Y**′09'48 18.70693 AU -239 May 12 j 10:59 16°847'05 0°-12'-16 conjunction -247 Dec 25 j 19:24 13°Y10'39 minimum elong -239 May 12 j 10:59 16°**8**47'05 0°12'18 direct behind sun begin -239 May 12 j 06:36 16°**8**46'27 17°**Υ**10'07 0°-31'-36 -239 May 12 j 15:21 -246 Apr 11 j 19:58 behind sun end 16°**8**47'42 conjunction -246 Apr 11 j 19:59 -239 May 12 j 03:00 17°**Υ**10'07 0°31'38 max. Earth dist. 16°**8**45'55 20.26229 AU minimum elong -246 Apr 12 j 03:16 17°**Y**11'10 20.68147 AU -239 Aug 31 j 05:40 21°800'11 max. Earth dist. retrograde -246 Aug 01 j 01:27 21°Υ17'46 -239 Nov 14 j 11:37 18°**8**58'36 0°-11'-47 retrograde opposition -239 Nov 14 j 19:28 -246 Oct 16 j 13:21 19°Υ16'56 0°-33'-42 min. Earth dist. 18°**8**57'45 18.22820 AU opposition -246 Oct 16 j 07:14 -238 Jan 28 j 02:20 19°**Υ**17'35 18.65538 AU direct 16°**8**57'27 min. Earth dist. -246 Dec 30 j 03:23 17°**Y**18'14 direct -238 May 17 j 06:12 21°**8**07'37 0°-9'-2 conjunction conjunction -245 Apr 16 j 09:09 21° \bolday 18'52 0°-29'-18 minimum elong -238 May 17 j 06:11 21°**8**07'37 0°09'03 minimum elong -245 Apr 16 j 09:09 21°Υ18'52 0°29'19 behind sun begin -238 May 17 j 00:28 21°**8**06'48 -245 Apr 16 j 14:26 max. Earth dist. 21°**Υ**19'37 20.62881 AU behind sun end -238 May 17 j 11:55 21°**8**08'27 retrograde -245 Aug 05 j 13:33 25°**Y**27'16 max. Earth dist. -238 May 16 j 19:26 21°806'03 20.19437 AU opposition -245 Oct 20 j 21:49 23°Y26'22 0°-31'-4 retrograde -238 Sep 04 j 22:59 25°**8**21'30 min. Earth dist. -245 Oct 20 j 18:17 23°**Υ**26'44 18.60165 AU opposition -238 Nov 18 j 23:49 23°**8**19'44 0°-8'-8 direct -244 Jan 03 j 10:29 21°**Y**27'25 min. Earth dist. -238 Nov 19 j 08:55 23°**8**18'46 18.16002 AU direct -237 Feb 01 j 17:19 21°**8**18'09 -244 Apr 19 j 23:14 25°\bar{\gamma}29'16 0°-26'-49 conjunction -244 Apr 19 j 23:14 -237 May 22 j 02:08 25°**8**29'49 0°-5'-44 minimum elong 25°Υ29'16 0°26'51 conjunction -244 Apr 20 j 02:37 25°**Υ**29'45 20.57411 AU -237 May 22 j 02:07 25°**8**29'49 0°05'45 max. Earth dist. minimum elong -244 Aug 09 i 04:05 29°Y38'28 -237 May 21 j 19:37 25°**8**28'52 retrograde behind sun begin 27°**Y**'37'29 0°-28'-14 opposition -244 Oct 24 i 06:40 behind sun end -237 May 22 i 08:36 25°830'45 min. Earth dist. -244 Oct 24 j 04:04 27°Υ37'46 18.54571 AU max. Earth dist. -237 May 21 j 14:08 25°**8**28'03 20.12597 AU direct -243 Jan 06 j 19:49 25°**Y**38'15 retrograde -237 Sep 09 j 14:25 29°844'28 opposition -237 Nov 23 j 12:44 27°**8**42'33 0°-4'-25 29°**Y**41'24 0°-24'-11 min. Earth dist. conjunction -243 Apr 24 j 14:11 -237 Nov 23 j 23:53 27°841'21 18.09175 AU -243 Apr 24 j 14:11 minimum elong 29°**Υ**41'24 0°24'11 direct -236 Feb 06 j 06:37 25°840'31 29°**Υ**41'35 20.51684 AU -243 Apr 24 j 15:24 max. Earth dist. -243 Apr 29 j 22:05 0° 8 conjunction -236 May 25 j 22:43 29°**8**53'41 0°-2'-22 -243 Aug 13 j 17:13 3°**8**51'23 minimum elong -236 May 25 j 22:44 29°**8**53'41 0°02'22 retrograde -243 Oct 28 j 16:14 1°**8**50'21 0°-25'-14 behind sun begin -236 May 25 j 15:57 29°**8**52'42 opposition min. Earth dist. -243 Oct 28 j 16:25 1°**8**50'19 18.48710 AU behind sun end -236 May 26 j 05:31 29°**8**54'40 -243 Dec 23 j 10:43 30°**₹**Υ max. Earth dist. 29°**8**51'31 20.05810 AU -236 May 25 j 08:05 -242 Jan 11 j 04:16 29°Y50'48 direct -236 May 27 j 17:07 $0^{\circ}\Pi$ -242 Jan 29 j 21:20 0° 8 retrograde -236 Sep 13 j 08:33 4°**Ⅲ**09'07 opposition -236 Nov 27 j 02:09 2°**I**07'04 0°00'-40 conjunction -242 Apr 29 j 06:12 3°**8**55'18 0°-21'-24 min. Earth dist. -236 Nov 27 j 14:27 2°**I**105'44 18.02442 AU minimum elong -242 Apr 29 j 06:12 3°855'18 0°21'25 asc. node -235 Feb 01 j 16:27 0°**I**I06'25 max. Earth dist. -242 Apr 29 j 04:53 3°855'06 20.45695 AU -235 Feb 09 j 22:39 0°耳04'35 direct

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -235 in astronomical counting style is the year 236 BCE in historical counting style. 4°**Ⅱ**19'18 0°01'08 -235 May 30 j 20:16 direct -228 Mar 13 j 07:42 1°9546'07 conjunction -235 May 30 j 20:17 4°**Ⅱ**19'18 0°01'08 minimum elong behind sun begin -235 May 30 j 13:29 4°**Ⅱ**18'19 -228 Jul 02 j 22:58 6°911'13 0°24'10 conjunction 6°511'13 0°24'10 -235 May 31 j 03:04 4°**I**I20'17 minimum elong -228 Jul 02 j 22:58 behind sun end -235 May 30 j 04:50 4°**Ⅱ**17'00 19.99128 AU -228 Jul 01 j 20:36 max. Earth dist. max. Earth dist. 6°907'10 19.58837 AU -235 Sep 18 j 01:40 8°II35'30 retrograde -228 Oct 20 j 02:58 retrograde 10°532'16 -235 Dec 01 j 16:25 6°**Ⅲ**33'20 -227 Jan 01 j 17:34 opposition 0°03'06 opposition 8°930'03 0°28'31 -235 Dec 02 j 06:22 -227 Jan 02 j 16:05 min. Earth dist. 6°**Ⅲ**31'50 17.95839 AU min. Earth dist. 8°927'35 17.56464 AU -234 Feb 14 j 14:07 4°**Ⅲ**30′28 direct direct -227 Mar 18 j 05:12 6°925'00 max. Earth dist. -227 Jul 06 j 23:12 10°547'14 19.54102 AU conjunction -234 Jun 04 j 18:27 8°II46'42 0°04'34 -234 Jun 04 j 18:27 8°**Ⅱ**46'43 0°04'35 -227 Jul 08 j 01:54 minimum elong conjunction 10°951'21 0°27'04 -234 Jun 04 j 11:49 8°**Ⅱ**45'44 -227 Jul 08 j 01:54 behind sun begin minimum elong 10°951'21 0°27'04 -234 Jun 05 j 01:06 behind sun end 8°**Ⅲ**47'41 retrograde -227 Oct 25 j 02:11 15°5512'52 max. Earth dist. -234 Jun 04 j 00:20 8°**Ⅱ**44'00 19.92621 AU opposition -226 Jan 06 j 13:59 13°9510'38 0°31'41 retrograde -234 Sep 22 j 20:29 13°**Ⅲ**03'41 min. Earth dist. -226 Jan 07 j 12:40 13°9508'09 17.51869 AU opposition -234 Dec 06 j 07:18 11°**Ⅲ**01'27 0°06'54 direct -226 Mar 23 j 04:05 11°905'19 min. Earth dist. -234 Dec 06 j 22:22 10°**Ⅲ**59'49 17.89449 AU max. Earth dist. -226 Jul 12 j 00:45 15°528'24 19.49658 AU direct -233 Feb 19 j 07:18 8°**Ⅲ**58'12 conjunction -226 Jul 13 j 05:01 15°532'47 0°29'49 conjunction -233 Jun 09 j 17:31 13°**I**I16'00 0°07'58 minimum elong -226 Jul 13 j 05:01 15°532'47 0°29'50 minimum elong -233 Jun 09 j 17:31 13°**Ⅱ**16′00 0°07'58 retrograde -226 Oct 30 i 00:36 19°954'42 behind sun begin -233 Jun 09 j 11:29 13°**Ⅱ**15'07 opposition -225 Jan 11 j 11:08 17°952'26 0°34'39 behind sun end -233 Jun 09 j 23:34 13°**Ⅱ**16'53 min. Earth dist. -225 Jan 12 j 11:21 17°9549'47 17.47610 AU max. Earth dist. -233 Jun 08 j 23:02 13°**Ⅱ**13'13 19.86341 AU direct -225 Mar 28 i 03:08 15°9546'49 retrograde -233 Sep 27 i 15:33 17°**Ⅲ**33'43 max. Earth dist. -225 Jul 17 j 04:00 20°510'54 19.45586 AU opposition -233 Dec 10 i 23:03 15°**Ⅲ**31'28 0°10'41 min. Earth dist. -233 Dec 11 j 15:19 15°**I**29'42 17.83299 AU -225 Jul 18 j 08:25 20°915'18 0°32'22 conjunction -232 Feb 24 i 00:48 13°**Ⅲ**27'53 -225 Jul 18 j 08:25 direct minimum elong 20°915'18 0°32'22 -225 Nov 04 j 00:03 24°9537'34 retrograde -232 Jun 13 j 17:02 17°**Ⅱ**47'13 0°11'20 -224 Jan 16 j 08:46 22°935'14 conjunction opposition 0°37'23 -232 Jun 13 j 17:02 -224 Jan 17 j 08:34 17°**II**47'13 0°11'20 min. Earth dist. minimum elong 22°532'38 17.43737 AU -232 Jun 13 j 12:10 17°**Ⅱ**46'30 -224 Apr 01 j 04:16 behind sun begin direct 20°9529'22 -232 Jun 13 j 21:55 -224 Jul 21 j 06:57 17°**Ⅱ**47'56 max. Earth dist. 24°954'14 19.41923 AU behind sun end -232 Jun 12 j 20:00 17°**耳**44′03 19.80331 AU max. Earth dist. -232 Oct 01 j 11:31 22°**I**105'43 -224 Jul 22 j 11:55 24°958'44 retrograde conjunction 0°34'43 -232 Dec 14 j 15:33 20°**Ⅲ**03'27 0°14'25 -224 Jul 22 j 11:54 opposition minimum elong 24°958'44 0°34'43 -224 Nov 07 j 22:12 min. Earth dist. -232 Dec 15 j 09:08 20°**Ⅱ**01'32 17.77430 AU retrograde 29°9521'15 direct -231 Feb 27 j 19:19 17°**Ⅲ**59'33 opposition -223 Jan 20 j 07:09 27°9518'53 0°39'53 min. Earth dist. -223 Jan 21 j 08:14 27°516'08 17.40313 AU conjunction -231 Jun 18 j 17:40 22°II20'26 0°14'40 direct -223 Apr 06 j 04:52 25°9512'46 minimum elong -231 Jun 18 j 17:40 22°II20'26 0°14'40 max. Earth dist. -223 Jul 26 j 10:25 29°538'22 19.38743 AU behind sun begin -231 Jun 18 j 15:08 22°**II**20'03 behind sun end -231 Jun 18 j 20:13 22°**II**20'48 -223 Jul 27 j 15:29 29°9542'54 0°36'49 conjunction max. Earth dist. -231 Jun 17 j 20:24 22°**Ⅲ**17'12 19.74585 AU minimum elong -223 Jul 27 j 15:29 29°9542'54 0°36'50 -231 Oct 06 i 08:34 -223 Aug 01 i 05:01 retrograde 26°**Ⅲ**39'37 $0^{\circ}\Omega$ -231 Dec 19 i 08:46 -223 Nov 12 j 21:47 4°Ω05'36 opposition 24°**II**37'23 0°18'06 retrograde -231 Dec 20 i 03:23 -222 Jan 25 i 05:52 2°Ω03'12 0°42'06 min. Earth dist. 24°**II**35'22 17.71812 AU opposition -230 Mar 04 j 14:44 -222 Jan 26 i 06:00 direct 22°II33'13 min. Earth dist. 2°Ω00'33 17.37390 AU -222 Mar 31 j 10:54 30°R95 -230 Jun 23 i 18:51 26°II55'35 0°17'56 direct -222 Apr 11 j 07:48 29°956'52 conjunction minimum elong -230 Jun 23 i 18:51 26°II55'35 0°17'56 -222 Apr 22 j 03:51 $0^{\circ}\Omega$ max. Earth dist. -230 Jun 22 j 19:00 26°**Ⅲ**51'57 19.69092 AU -230 Aug 18 j 08:58 0ಂತಾ conjunction -222 Aug 01 j 19:05 4°Ω27'39 0°38'41 -230 Oct 11 j 05:58 -222 Aug 01 j 19:05 retrograde 1°9515'28 minimum elong 4°Ω27'39 0°38'41 -230 Dec 05 j 17:32 -222 Jul 31 j 14:36 30°RⅡ max. Earth dist. 4°**Ω**23'12 19.36089 AU -230 Dec 24 j 02:57 -222 Nov 17 j 20:15 opposition 29°**Ⅱ**13'14 0°21'42 retrograde $8^{\circ}\Omega50'28$ 29°**Ⅱ**11'03 17.66455 AU min. Earth dist. -230 Dec 24 j 23:10 opposition -221 Jan 30 j 05:25 6°**Ω**48'03 0°44'02 -229 Mar 09 j 10:40 27°**I**108'47 min. Earth dist. -221 Jan 31 j 06:17 6°**Ω**45'20 17.35038 AU direct -229 Jun 03 j 03:36 0ಂತಾ direct -221 Apr 16 j 09:25 4°**Ω**41'33 -229 Jun 28 j 20:38 conjunction 1°532'33 0°21'06 conjunction -221 Aug 06 j 22:20 9°**Ω**12'51 0°40'17 -229 Jun 28 j 20:38 minimum elong 1°**9**32'33 0°21'06 minimum elong -221 Aug 06 j 22:20 9°**Ω**12'51 0°40'17 -229 Jun 27 j 20:34 max. Earth dist. 1°9528'53 19.63844 AU max. Earth dist. -221 Aug 05 j 17:52 9°**Ω**08'23 19.34044 AU retrograde -229 Oct 16 j 04:36 5°953'03 retrograde -221 Nov 22 j 20:32 13°**Ω**35'44 opposition -229 Dec 28 j 21:55 3°950'51 -220 Feb 04 j 05:13 11°Ω33'20 0°45'41 0°25'11 opposition

min. Earth dist.

-229 Dec 29 j 18:44

3°548'35 17.61328 AU

min. Earth dist.

-220 Feb 05 j 04:38

11°**Ω**30'47 17.33306 AU

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Earth dist. 22° Mp 00'52 19.41769 AU -219 Feb 09 j 05:15 $16^{\circ}\Omega 16'24$ 17.32214 AU -211 Jan 03 j 19:04 min. Earth dist. retrograde 26° Mp 24'17-211 Mar 18 j 18:43 -219 Mar 12 j 20:36 15°**Ŗ**Ω opposition 24° Mp 22'54 0°45'42 direct -219 Apr 25 j 15:03 14°**Ω**12'21 min. Earth dist. -211 Mar 19 j 09:50 24° Mp 21'17 17.43330 AU -219 Jun 07 j 12:13 -211 Jun 03 j 19:56 22° Tp 17'26 15°**Ω** direct -219 Aug 15 j 01:51 max. Earth dist. 18°**Ω**40'05 19.31868 AU conjunction -211 Sep 23 j 15:57 26° Mp 46'32 0°40'18 conjunction -219 Aug 16 j 04:53 18° **Ω**44'20 0°42'39 minimum elong -211 Sep 23 j 15:57 26° Mp 46'320°40'18 minimum elong -219 Aug 16 j 04:53 18°**Ω**44'20 0°42'38 max. Earth dist. -211 Sep 22 j 23:34 26° m 43'58 19.44950 AU -219 Dec 01 j 20:22 retrograde 23°**Ω**07'11 -211 Nov 20 j 00:19 0∘**⊽** opposition -218 Feb 13 j 06:14 21°**Ω**04'57 0°48'00 retrograde -210 Jan 08 j 15:45 1°**≏**06'37 min. Earth dist. -218 Feb 14 j 04:25 21°**Ω**02'32 17.31771 AU -210 Mar 01 j 16:10 30°R M direct -218 Apr 30 j 18:57 18°**Ω**58'21 opposition -210 Mar 23 j 20:37 29° m 05'17 0°44'04 max. Earth dist. -218 Aug 20 j 06:55 23°**Ω**26'34 19.31732 AU min. Earth dist. -210 Mar 24 j 10:45 29° m 03'47 17.46720 AU direct -210 Jun 08 j 22:38 27° m 00'02 conjunction -218 Aug 21 i 07:49 23°Ω30'29 0°43'24 -210 Sep 04 j 19:40 0∘**⊽** minimum elong -218 Aug 21 j 07:48 23°**Ω**30′29 0°43'25 retrograde -218 Dec 06 i 20:00 27°**Ω**53'14 conjunction -210 Sep 28 i 14:16 1°**≏**28′08 0°38'43 opposition -217 Feb 18 i 07:29 25°Ω51'08 0°48'41 minimum elong -210 Sep 28 j 14:16 1°**£**28′08 0°38'42 min. Earth dist. -217 Feb 19 i 05:34 25°**Ω**48'44 17.31933 AU max. Earth dist. -210 Sep 28 j 00:13 1°**2**25'55 19.48558 AU -217 May 05 j 21:25 retrograde -209 Jan 13 j 14:00 5°**-**47'34 direct 23° \$\O44'39 max. Earth dist. -217 Aug 25 j 09:27 opposition -209 Mar 28 j 22:10 3°<u>₽46'18</u> 0°42'09 28°**Ω**12'51 19.32192 AU -209 Mar 29 j 09:48 min. Earth dist. 3°**2**45'03 17.50526 AU 28°Ω16'47 0°43'51 -209 Jun 14 j 03:25 -217 Aug 26 j 10:22 conjunction direct 1°**£**41'16 -217 Aug 26 j 10:22 minimum elong 28°Ω16'47 0°43'51 6°**2**08'15 0°36'53 -217 Sep 23 j 08:56 -209 Oct 03 j 11:49 0° m conjunction -217 Dec 11 j 20:49 -209 Oct 03 j 11:49 2° m 39'22 minimum elong retrograde 6°**2**08'15 0°36'52 -216 Feb 23 j 08:49 -209 Oct 02 j 23:41 0° m 37'25 0° 49'02 max. Earth dist. opposition 6°**2**06'21 19.52585 AU -216 Feb 24 j 05:34 -208 Jan 18 j 09:25 min. Earth dist. 0° m 35'10 17.32672 AU retrograde 10°**£**27′00 -216 Mar 08 j 23:22 -208 Apr 01 j 23:19 30°R€ opposition 8°**£**25'47 0°39'58 direct -216 May 10 j 00:56 28° **Q**31'02 min. Earth dist. -208 Apr 02 j 09:55 8°**£**24'39 17.54783 AU -216 Jul 08 j 13:14 0°m direct -208 Jun 18 j 04:36 6°**₽**20'59 -208 Oct 07 j 08:28 conjunction -216 Aug 30 j 12:45 3° Mp 03'03 0°44'00 conjunction 10° **△**46'48 0°34'49 minimum elong -216 Aug 30 j 12:45 3° m 03'03 0°44'01 minimum elong -208 Oct 07 j 08:28 10°**≏**46'48 0°34'49 max. Earth dist. -216 Aug 29 j 14:05 2° m 59'29 19.33190 AU max. Earth dist. -208 Oct 06 j 22:30 10°**♀**45'14 19.57076 AU retrograde -216 Dec 15 j 21:01 7° m 25'23 retrograde -207 Jan 22 j 06:57 15°**♀**04'48 -215 Feb 27 j 10:39 5° m 23'35 0°49'02 -207 Apr 07 j 00:09 13°**≏**03'41 opposition opposition 0°37'33 -215 Feb 28 i 06:54 -207 Apr 07 i 07:41 min. Earth dist. 5° m 21'24 17.33911 AU min. Earth dist. 13°**2**02'53 17.59490 AU -207 Jun 23 i 07:17 direct -215 May 15 j 04:12 3°m 17'22 direct 10°**♀**59'11 -215 Sep 04 j 14:32 7° m 49'05 0°43'51 -207 Oct 12 i 04:12 conjunction conjunction 15°**2**3'43 0°32'33 -207 Oct 12 i 04:12 minimum elong -215 Sep 04 i 14:32 7° mo 49'05 0°43'51 minimum elong 15°**≏**23'43 0°32'32 -215 Sep 03 i 15:56 max. Earth dist. 7° m 45'31 19.34673 AU max. Earth dist. -207 Oct 11 j 20:50 15°**2**22'34 19.62012 AU retrograde -215 Dec 20 j 21:06 12° m 11'08 retrograde -206 Jan 27 j 02:01 19°**£**40′59 -214 Mar 04 j 12:37 10° m 09'27 0°48'42 opposition -206 Apr 12 j 00:47 17°**≏**39'58 0°34'54 opposition -214 Mar 05 j 07:40 min. Earth dist. min. Earth dist. 10° M 07'24 17.35631 AU -206 Apr 12 j 07:03 17°**2**39'18 17.64656 AU direct -214 May 20 j 07:21 8° m 03'24 direct -206 Jun 28 j 07:04 15°**♀**35'48 conjunction -214 Sep 09 j 15:58 12° m 34'41 0°43'24 conjunction -206 Oct 16 j 23:04 19°**♀**59'01 0°30'05 -214 Sep 09 j 15:58 12° m 34'41 0°43'24 minimum elong -206 Oct 16 j 23:04 19°**♀**59'01 0°30'05 minimum elong -214 Sep 08 j 19:42 12° Mp 31'29 19.36617 AU max. Earth dist. -206 Oct 16 j 17:39 max. Earth dist. 19°**≙**58'11 19.67407 AU -214 Dec 25 j 21:19 retrograde -205 Jan 31 j 22:56 retrograde 16° My 56'2024°**₽**15'32 -213 Mar 09 j 14:46 -205 Apr 17 j 00:42 opposition 14° **m** 54'46 0°48'01 opposition 22°**₽**14'40 0°32'02 min. Earth dist. -213 Mar 10 j 08:39 14° Mp 52'51 17.37783 AU min. Earth dist. -205 Apr 17 j 03:43 22°**♀**14'21 17.70246 AU direct -213 May 25 j 11:43 12° m 48'55 direct -205 Jul 03 j 07:33 20°**₽**10'53 conjunction -213 Sep 14 j 16:32 17° m 19'36 0°42'39 conjunction -205 Oct 21 j 17:07 24°**△**32'44 0°27'26 minimum elong -213 Sep 14 j 16:32 17° m) 19'36 0°42'40 minimum elong -205 Oct 21 j 17:07 24°**≏**32'44 0°27'26 max. Earth dist. -213 Sep 13 j 20:47 17° Mp 16'29 19.38986 AU max. Earth dist. -205 Oct 21 j 14:35 24°**♀**32'20 19.73188 AU

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -204 in astronomical counting style is the year 205 BCE in historical counting style. -204 Feb 05 i 17:26 28°**≏**48'28 retrograde behind sun begin -198 Nov 20 j 18:46 25°M40'56 opposition -204 Apr 21 j 00:24 26°**₽**47'46 0°29'00 behind sun end -198 Nov 21 i 07:19 25°M42'48 min. Earth dist. -204 Apr 21 j 02:18 26°**2**47'34 17.76194 AU max. Earth dist. -198 Nov 21 j 10:58 25°M43'21 20.18497 AU -204 Jul 07 j 06:04 24°**-**44'25 -197 Mar 08 j 18:46 direct 29°M52'01 retrograde 0°04'27 -197 May 24 j 06:10 opposition 27°M52'15 -204 Oct 25 j 10:16 29°**△**04'50 0°24'39 -197 May 23 j 18:42 conjunction min. Earth dist. 27°M53'26 18.21706 AU -204 Oct 25 j 10:16 29°**♀**04'50 0°24'38 -197 Aug 09 j 08:28 minimum elong direct 25°M51'46 -204 Oct 25 j 09:16 29°**△**04'41 19.79295 AU max. Earth dist. 0°**∡**¹01'37 -204 Nov 09 j 08:08 0°M -197 Nov 25 j 12:49 conjunction 0°02'24 -203 Feb 09 j 13:41 -197 Nov 25 j 12:49 retrograde 3°M19'48 minimum elong 0°**∡**'01'37 0°02'24 1°M19'16 0°25'48 -197 Nov 25 j 06:17 opposition -203 Apr 25 j 23:25 behind sun begin 0°**₹**00'40 min. Earth dist. -203 Apr 25 j 22:13 -197 Nov 25 j 19:21 1°M19'24 17.82426 AU behind sun end 0°**х¹**02'35 -203 May 30 j 11:48 -197 Nov 25 j 02:02 30°**₽**Ω 0°×7 direct -203 Jul 12 j 05:17 29°**2**16'21 max. Earth dist. -197 Nov 26 j 01:27 0°**≯**03'31 20.24915 AU -203 Aug 22 j 14:26 0°M retrograde -196 Mar 12 j 07:48 4°**х** 10′58 opposition -196 May 28 j 00:50 2°**∡**11'15 0°00'46 conjunction -203 Oct 30 j 02:46 3°M35'20 0°21'43 min. Earth dist. -196 May 27 j 12:11 2°**∡**12'33 18.28073 AU minimum elong -203 Oct 30 j 02:46 3°M35'20 0°21'43 desc. node -196 Aug 12 j 18:32 0°**∡**11'06 max. Earth dist. -203 Oct 30 j 04:43 3°M35'38 19.85641 AU direct -196 Aug 13 j 02:27 0°**∡**11'06 retrograde -202 Feb 14 j 06:57 7°M49'30 opposition -202 Apr 30 j 22:13 5°**M**₄49'09 0°22'27 conjunction -196 Nov 28 j 23:29 4°**∡**19'25 0°00'-59 min. Earth dist. -202 Apr 30 j 19:59 5°ML49'23 17.88867 AU minimum elong -196 Nov 28 i 23:29 4°**∡**19'25 0°01'00 direct -202 Jul 17 j 03:07 3°M46'41 behind sun begin -196 Nov 28 j 16:58 4°**∡**18'28 behind sun end -196 Nov 29 i 06:01 4°**х** 20′23 conjunction -202 Nov 03 j 18:14 8°ML04'09 0°18'40 max. Earth dist. -196 Nov 29 j 12:48 4° ₹21'25 20.31242 AU minimum elong -202 Nov 03 i 18:14 8°ML04'09 0°18'39 retrograde -195 Mar 16 i 22:12 8°**҂**¹28′00 max. Earth dist. -202 Nov 03 i 21:20 8°ML04'37 19.92162 AU opposition -195 Jun 01 j 18:43 6°**∡**°28'19 0°-2'-53 retrograde -201 Feb 19 j 02:10 12°ML17'33 min. Earth dist. -195 Jun 01 j 04:07 6°**≯**29'48 18.34373 AU -201 May 05 j 20:15 direct -195 Aug 17 j 18:57 4°**∡**°28'28 opposition 10°M17'20 0°18'59 -201 May 05 j 15:13 min. Earth dist. 10°M17'52 17.95441 AU -201 Jul 22 j 01:05 -195 Dec 03 j 09:40 8°**₹**35'20 0°-4'-18 direct 8°M15'19 conjunction -195 Dec 03 j 09:40 minimum elong 0°04'20 8°**∡**³35′20 -201 Nov 08 j 09:13 -195 Dec 03 j 03:14 conjunction 12°M31'17 0°15'31 behind sun begin 8°**҂**³34'23 -201 Nov 08 j 09:13 -195 Dec 03 j 16:05 8°**х¹**36′16 12°M31'17 behind sun end minimum elong 0°15'31 -201 Nov 08 j 07:11 -195 Dec 04 j 01:51 max. Earth dist. 8°**✗**37'45 20.37505 AU behind sun begin 12°MJ30'58 -194 Mar 21 j 10:21 12°**∡**¹43′08 -201 Nov 08 j 11:15 behind sun end 12°MJ31'35 retrograde -201 Nov 08 j 15:06 -194 Jun 06 j 11:49 10°**∡**°43'31 max. Earth dist. 12°M32'10 19.98766 AU opposition 0°-6'-30 -201 Dec 21 j 09:21 15°M₀ min. Earth dist. -194 Jun 05 j 19:39 10°**∡**′45′09 18.40610 AU retrograde -200 Feb 23 j 18:02 16°M43'51 direct -194 Aug 22 j 11:05 8°×743'59 -200 May 03 j 03:50 15°RM -194 Dec 07 j 18:55 opposition -200 May 09 j 17:41 14°M43'48 0°15'26 conjunction 12°**∡**′49'25 0°-7'-31 min. Earth dist. -200 May 09 j 11:46 14°M44'25 18.02063 AU minimum elong -194 Dec 07 j 18:55 12°**∡**¹49'25 0°07'32 direct -200 Jul 25 j 21:46 12°M42'12 behind sun begin -194 Dec 07 j 12:57 12°**∡**¹48'33 -200 Oct 10 j 00:35 behind sun end -194 Dec 08 j 00:53 12°**х** 50′17 15°M₀ max. Earth dist. -194 Dec 08 j 11:46 12°**₹**'51'56 20.43716 AU -200 Nov 11 j 23:16 -193 Mar 25 i 23:03 16°**х** 56'31 conjunction 16°M56'39 0°12'18 retrograde -200 Nov 11 j 23:16 -193 Jun 10 j 10:17 14°**₹**58'45 18.46803 AU minimum elong 16°M56'39 0°12'17 min. Earth dist. -200 Nov 11 j 18:50 14°**∡** 56'57 behind sun begin 16°M55'59 opposition -193 Jun 11 i 04:07 0°-10'-2 -193 Aug 27 j 00:46 -200 Nov 12 j 03:43 behind sun end 16°M57'18 direct 12°×757'44 max. Earth dist. -200 Nov 12 i 05:52 16°ML57'38 20.05395 AU retrograde -199 Feb 27 i 11:54 21°M08'25 conjunction -193 Dec 12 i 03:47 17°**∡**101'50 0°-10'-40 opposition minimum elong -199 May 14 i 14:33 19°ML08'29 0°11'49 -193 Dec 12 i 03:46 17°**∡**'01'50 0°10'42 min. Earth dist. -199 May 14 j 06:11 19°M09'20 18.08682 AU behind sun begin -193 Dec 11 j 22:41 17°**∡**01'06 17°**∡**°02'34 -199 Jul 30 j 18:21 -193 Dec 12 j 08:52 direct 17°M07'16 behind sun end max. Earth dist. -193 Dec 12 j 23:17 17°**✗**04'44 20.49862 AU 21°M20'11 0°09'02 -199 Nov 16 j 12:35 -192 Mar 29 j 10:42 conjunction retrograde 21°**₹**'08'16 -199 Nov 16 j 12:35 0°-13'-30 minimum elong 21°M20'11 0°09'02 opposition -192 Jun 14 j 19:33 19°**∡**¹08'47 -199 Nov 16 j 06:58 behind sun begin 21°M19'21 min. Earth dist. -192 Jun 14 j 00:08 19°**✗**10'45 18.52901 AU -199 Nov 16 j 18:12 direct -192 Aug 30 j 15:10 17°**∡**09'55 behind sun end 21°M21'01 -199 Nov 16 j 21:58 max. Earth dist. 21°M21'36 20.11983 AU -198 Mar 04 j 02:29 -192 Dec 15 j 11:55 21°×12'44 0°-13'-45 retrograde 25°M31'09 conjunction -198 May 19 j 10:52 -192 Dec 15 j 11:55 opposition 23°MJ31'19 $0^{\circ}08'08$ minimum elong 21°**х** 12'43 0°13'46 min. Earth dist. -198 May 19 j 01:28 23°MJ32'17 18.15233 AU behind sun begin -192 Dec 15 j 08:18 21°**∡**12'12 direct -198 Aug 04 j 13:49 21°M30'30 behind sun end -192 Dec 15 j 15:31 21°**х** 13′15 max. Earth dist. -192 Dec 16 j 07:52 21°**✗**15'41 20.55910 AU -198 Nov 21 j 01:03 25°M41'52 0°05'44 retrograde -191 Apr 02 j 22:24 25°**∡**18'33 conjunction -198 Nov 21 j 01:02 25°M41'52 0°05'44 -191 Jun 19 j 10:30 23°**х** 19'10 0°-16'-53 minimum elong opposition

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Earth dist. retrograde -190 Jun 24 j 00:43 -182 Jul 27 j 21:07 0°**≈**00'43 0°-40'-55 opposition 27°**∡**°28′11 0°-20'-9 opposition -190 Sep 08 j 15:16 -182 Jul 26 j 19:44 direct 25°**х** 30′01 min. Earth dist. 0°≈03'15 18.98064 AU -182 Jul 28 j 04:13 30°Rる -190 Dec 24 j 02:50 29°**∡** 30'26 0°-19'-39 -182 Oct 11 j 17:50 28°る04'09 conjunction direct -190 Dec 24 j 02:50 0°19'40 -182 Dec 20 j 13:18 minimum elong 29°**х** 30′26 0°≈ -190 Dec 25 j 01:21 max. Earth dist. 29°**✗**33'45 20.67515 AU -189 Jan 01 j 11:25 0°궁 conjunction -181 Jan 25 j 02:58 1°**≈**57'46 0°-37'-50 retrograde -189 Apr 11 j 20:53 3°る35'09 minimum elong -181 Jan 25 j 02:58 1°**≈**57'46 0°37'51 -189 Jun 28 j 14:12 -181 Jan 26 j 04:50 opposition 1°る35'59 0°-23'-18 max. Earth dist. 2°≈01'30 20.99169 AU min. Earth dist. -189 Jun 27 j 15:32 1°る38'15 18.70286 AU retrograde -181 May 15 j 01:55 5°≈59'36 -189 Aug 14 j 02:36 30°R*x* min. Earth dist. -181 Jul 31 j 05:32 4°≈02'52 19.00270 AU direct -189 Sep 13 j 01:36 29°**х** 38′08 opposition -181 Aug 01 j 06:05 4°≈00'25 0°-42'-40 -189 Oct 12 j 08:25 0°궁 direct -181 Oct 15 j 23:22 2°≈03'55 conjunction -189 Dec 28 i 09:50 3°る37'29 0°-22'-26 conjunction -180 Jan 29 i 08:13 5°≈57'02 0°-39'-20 minimum elong -189 Dec 28 i 09:50 3°る37'29 0°22'27 minimum elong -180 Jan 29 i 08:13 5°≈57'02 0°39'21 max. Earth dist. -189 Dec 29 i 10:16 3°る41'04 20.72944 AU max. Earth dist. -180 Jan 30 j 11:09 6°≈00'54 21.01189 AU retrograde -188 Apr 15 i 07:44 7°₹41'41 retrograde -180 May 18 j 10:53 9°≈58'42 min. Earth dist. -188 Jul 01 j 03:15 5°る45'01 18.75551 AU opposition -180 Aug 04 j 14:35 7°**≈**59'27 0°-44'-13 opposition -188 Jul 02 j 03:08 5°₹42'38 0°-26'-19 min. Earth dist. -180 Aug 03 j 13:08 8°≈02'00 19.02110 AU -188 Sep 16 j 12:29 3°る45'06 direct -180 Oct 19 j 07:13 6°≈03'01 direct -179 Feb 01 j 13:09 -188 Dec 31 j 16:15 7°る43'25 0°-25'-6 conjunction 9°≈55'44 0°-40'-38 conjunction -188 Dec 31 j 16:15 7°る43'25 0°25'08 minimum elong -179 Feb 01 j 13:09 minimum elong 9°≈55'44 0°40'38 -179 Feb 02 j 15:18 -187 Jan 01 j 16:28 7°る46'57 20.78031 AU max. Earth dist. 9°≈59'29 21.02853 AU max. Earth dist. -187 Apr 19 j 18:21 11°る47'12 -179 May 22 j 18:44 retrograde 13°≈57'21 retrograde -187 Jul 06 j 15:40 9°る48'12 0°-29'-11 -179 Aug 08 j 22:52 opposition 11°≈58'02 0°-45'-32 opposition -187 Jul 05 j 15:43 -179 Aug 07 j 22:21 min. Earth dist. 9°る50'36 18.80461 AU min. Earth dist. 12°≈00'30 19.03612 AU -187 Sep 20 j 21:59 direct -179 Oct 23 j 11:40 7°る50'56 10°≈01'39 direct conjunction -186 Jan 04 j 22:43 11°る48'18 0°-27'-38 conjunction -178 Feb 05 j 18:26 13°≈54'04 0°-41'-44 -186 Jan 04 j 22:43 minimum elong 11°る48'18 0°27'38 minimum elong -178 Feb 05 j 18:26 13°≈54'04 0°41'45 -186 Jan 06 j 00:25 max. Earth dist. 11°る52'04 20.82726 AU max. Earth dist. -178 Feb 06 j 21:24 13°≈57'56 21.04181 AU retrograde -186 Apr 24 j 04:54 15°る51'40 -178 Feb 25 j 03:47 15°≈ min. Earth dist. -186 Jul 10 j 02:31 13°る55'13 18.84935 AU retrograde -178 May 27 j 03:21 17°≈55'40 -186 Jul 11 j 03:25 13°る52'43 0°-31'-54 min. Earth dist. -178 Aug 12 j 05:16 15°≈58'51 19.04758 AU opposition direct -186 Sep 25 j 07:59 11°**る**55'42 opposition -178 Aug 13 j 06:29 15°≈56'19 0°-46'-38 -178 Sep 06 i 16:02 15°R≈ -185 Jan 09 i 04:47 15°る52'10 0°-30'-1 -178 Oct 27 i 18:39 conjunction direct 14°≈00'00 -185 Jan 09 i 04:47 15°る52'10 0°30'02 -178 Dec 15 j 19:53 minimum elong 15°**≈** -185 Jan 10 j 05:48 15°る55'49 20.86963 AU max. Earth dist. -185 Apr 28 i 14:31 retrograde 19°る55'10 conjunction -177 Feb 09 i 23:42 17°≈52'14 0°-42'-38 -177 Feb 09 i 23:42 opposition -185 Jul 15 i 14:46 17°る56'14 0°-34'-27 minimum elong 17°≈52'14 0°42'38 min. Earth dist. -185 Jul 14 j 14:20 17°る58'40 18.88939 AU max. Earth dist. -177 Feb 11 i 01:31 17°≈55'56 21.05146 AU direct -185 Sep 29 j 16:25 15°る59'23 retrograde -177 May 31 j 11:44 21°≈53'53 -177 Aug 17 j 14:06 opposition 19°**≈**54'31 0°-47'-31 -184 Jan 13 j 10:44 19°る55'02 0°-32'-14 conjunction min. Earth dist. -177 Aug 16 j 14:09 19°≈56'55 19.05543 AU -184 Jan 13 j 10:44 minimum elong 19°**る**55'02 0°32'15 direct -177 Oct 31 j 22:36 17°≈58'15 -184 Jan 14 j 12:53 max. Earth dist. 19°る58'50 20.90713 AU -184 May 02 j 00:34 retrograde 23°る57'40 -176 Feb 14 j 05:09 21°≈50'23 0°-43'-20 conjunction -176 Feb 14 j 05:09 min. Earth dist. -184 Jul 18 j 00:08 22°る01'14 18.92436 AU minimum elong 0°43'21 21°≈50'23 -176 Feb 15 j 07:31 -184 Jul 19 j 01:23 21°る58'42 0°-36'-48 max. Earth dist. opposition 21°**≈**54′09 21.05739 AU direct -184 Oct 03 j 01:57 20°る02'00 retrograde -176 Jun 03 j 20:20 25°≈52'09 opposition -176 Aug 20 j 21:19 23°**≈**52'47 0°-48'-10 -183 Jan 16 j 16:18 conjunction 23°**る**56'53 0°-34'-17 min. Earth dist. -176 Aug 19 j 20:55 23°≈55'14 19.05930 AU minimum elong -183 Jan 16 j 16:18 23°**る**56'53 0°34'18 direct -176 Nov 04 j 04:45 21°≈56'33 max. Earth dist. -183 Jan 17 j 17:44 24°る00'34 20.93971 AU

-175 Feb 17 j 10:50

-175 Feb 17 j 10:50

conjunction

minimum elong

25°**≈**48'41

25°**≈**48'41

0°-43'-49

0°43'51

retrograde

min. Earth dist.

-183 May 06 j 08:53

-183 Jul 22 j 11:04

27°る59'13

26°る02'38 18.95472 AU

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Earth dist. 29°≈50'52 21.05669 AU -174 Feb 25 j 09:59 0°**)**€ conjunction -166 Mar 26 j 09:08 1°**Y**'52'15 0°-38'-42 retrograde -174 Jun 12 j 13:56 3°**)** 49′28 minimum elong -166 Mar 26 j 09:08 1°Y52'15 0°38'43 -174 Aug 29 j 11:26 1°**)** € 50'03 -166 Mar 26 j 23:19 1°Υ′54'17 20.85608 AU opposition 0°-48'-48 max. Earth dist. -166 Jul 15 j 14:34 min. Earth dist. -174 Aug 28 j 12:44 1°**¥**52'20 19.05398 AU retrograde 5°**Y**57′27 -174 Oct 28 j 01:03 30°R≈ opposition -166 Sep 30 j 17:49 3°Y56'58 0°-41'-55 direct -174 Nov 12 j 14:40 29°≈53'50 min. Earth dist. -166 Sep 30 j 05:35 3°Υ58'14 18.83526 AU -174 Nov 27 j 23:47 0°**)**€ direct -166 Dec 14 j 11:25 1°Y59'14 conjunction -173 Feb 25 j 23:33 3°\(\frac{1}{46}\)'16 0°-44'-11 conjunction -165 Mar 30 j 19:19 5°**Y**55'49 0°-37'-6 minimum elong -173 Feb 25 j 23:33 3°**)**(46'16 0°44'12 minimum elong -165 Mar 30 j 19:19 5°**Y**55'49 0°37'06 max. Earth dist. -173 Feb 26 j 22:42 3°**)** 49'34 21.04907 AU max. Earth dist. -165 Mar 31 j 07:23 5°Υ57'33 20.81349 AU retrograde -173 Jun 16 j 21:45 7°**)** 48'42 retrograde -165 Jul 19 j 23:54 10°**℃**01'36 opposition -173 Sep 02 j 18:20 5°**)**(49'15 0°-48'-45 opposition -165 Oct 05 i 01:01 8°**Y**00′59 0°-40'-3 min. Earth dist. -173 Sep 01 j 21:48 5°**)**51'19 19.04376 AU min. Earth dist. -165 Oct 04 i 15:06 8°**Υ**02'00 18.79142 AU direct -173 Nov 16 j 19:05 3°¥52'59 direct -165 Dec 18 j 16:26 6°**℃**03'00 -172 Mar 01 j 06:35 7°**H**45'40 0°-44'-2 -164 Apr 03 j 06:18 10°**Y**′00′29 0°-35'-18 conjunction conjunction -172 Mar 01 i 06:35 7°**H**45'40 0°44'02 minimum elong -164 Apr 03 j 06:18 10°**Y**′00′29 0°35'20 minimum elong max. Earth dist. -172 Mar 02 i 05:18 7°**)** 48'55 21.03620 AU max. Earth dist. -164 Apr 03 j 17:25 10°**Υ**'02'05 20.76856 AU -172 Jun 20 j 07:34 11°**)**(48'24 retrograde -164 Jul 23 j 12:16 14°**Y**06'54 retrograde -172 Sep 05 j 04:53 9°**)** 50′54 19.02805 AU -164 Oct 08 j 08:22 12°**Υ**06'10 0°-37'-58 min. Earth dist. opposition -172 Sep 06 j 01:09 -164 Oct 07 j 22:49 12°**Υ**07'09 18.74525 AU 9°**)**(48'51 0°-48'-29 min. Earth dist. opposition -172 Nov 20 j 01:14 -164 Dec 22 j 00:12 10°**Y**07'56 7°**¥**52'30 direct direct -163 Apr 07 j 17:54 -171 Mar 05 j 13:47 14°Υ06'25 0°-33'-20 11°**)**45'30 0°-43'-40 conjunction conjunction -171 Mar 05 j 13:47 -163 Apr 07 j 17:54 11°\(\dagger45'30\) 0°43'42 14°**Υ**06'25 0°33'20 minimum elong minimum elong -171 Mar 06 j 10:21 -163 Apr 08 j 02:54 11°**¥**48'26 21.01774 AU max. Earth dist. 14°**Y**07'42 20.72125 AU max. Earth dist. 15°**)** 48′34 -163 Jul 27 j 22:46 -171 Jun 24 j 15:06 18°**Y**13'31 retrograde retrograde -163 Oct 12 j 16:14 opposition -171 Sep 10 j 08:05 13°**)** 48′54 0°-47′-58 opposition 16°Υ12'41 0°-35'-41 min. Earth dist. -171 Sep 09 j 14:11 13°**¥**50'43 19.00685 AU min. Earth dist. -163 Oct 12 j 09:11 16°**Y**13'25 18.69676 AU -171 Nov 24 j 05:37 direct 11°**)** 52'22 direct -163 Dec 26 j 05:53 14°**Y**14'13 -170 Mar 09 j 21:40 15°**)** 45'46 0°-43'-6 conjunction -162 Apr 12 j 06:30 18°Υ13'47 0°-31'-10 conjunction -170 Mar 09 j 21:40 15°\ 45'46 0°43'06 minimum elong -162 Apr 12 j 06:30 18°Υ13'47 0°31'11 minimum elong max. Earth dist. -170 Mar 10 j 17:34 15°**)** 48'37 20.99399 AU max. Earth dist. -162 Apr 12 j 14:09 18°**Y**14'53 20.67170 AU retrograde -170 Jun 29 j 01:08 19°**)** 49′10 retrograde -162 Aug 01 j 12:27 22°Y21'36 -170 Sep 14 j 14:38 17°**)** 49'21 0°-47'-13 -162 Oct 17 i 00:12 20°\bar{\gamma}20'43 0°-33'-12 opposition opposition -170 Sep 13 j 21:09 17°**)** €51'08 18.98047 AU -162 Oct 16 j 17:51 20°**Υ**21'22 18.64590 AU min. Earth dist. min. Earth dist. -170 Nov 28 j 12:20 -162 Dec 30 j 14:41 18°**Y**21′59 direct 15°**¥**52'38 direct -169 Mar 14 i 05:47 19°¥46'30 0°-42'-18 conjunction -161 Apr 16 j 19:50 22°**Y**'22'45 0°-28'-50 conjunction minimum elong -169 Mar 14 i 05:47 19°**¥**46'30 0°42'20 minimum elong -161 Apr 16 i 19:50 22°Y22'45 0°28'51 -169 Mar 14 i 23:29 max. Earth dist. 19°**¥**49'01 20.96526 AU max. Earth dist. -161 Apr 17 j 01:11 22°Υ23'31 20.61955 AU retrograde -169 Jul 03 j 08:36 23°**¥**50′16 retrograde -161 Aug 06 j 00:04 26°Y31'19 -169 Sep 18 j 21:26 21°**)** 50'17 0°-46'-14 -161 Oct 21 j 08:54 24° \bar{\gamma} 30'22 0° - 30' - 32 opposition opposition -169 Sep 18 j 06:19 24°**Υ**30'45 18.59244 AU min. Earth dist. 21°**)**51'50 18.94954 AU min. Earth dist. -161 Oct 21 j 05:17 -169 Dec 02 j 16:41 22°**Y**31'23 direct 19°**¥**53′20 direct -160 Jan 03 j 21:31 -168 Mar 17 j 14:18 23°\(\frac{1}{47}'44\) 0°-41'-19 -160 Apr 20 j 09:58 26° Y 33'22 0°-26'-20 conjunction conjunction -168 Mar 17 j 14:18 23°**)** 47'44 0°41'20 -160 Apr 20 j 09:58 26°**Y**33′22 0°26'20 minimum elong minimum elong -168 Mar 18 j 07:23 23°**₭**50'10 20.93237 AU max. Earth dist. -160 Apr 20 j 13:33 26°**Ƴ**33'53 20.56479 AU max. Earth dist. -168 Jul 06 j 19:04 -160 Jun 28 j 22:34 0° 8 retrograde 27°**)** 51'56 -160 Aug 09 j 14:57 opposition -168 Sep 22 j 04:07 25°**H**51'47 0°-45'-1 retrograde 0°**8**42'44 min. Earth dist. -168 Sep 21 j 13:15 25°**¥**53′18 18.91468 AU -160 Sep 20 j 19:52 30°**₹**Υ direct -168 Dec 05 j 23:37 23°**)** 54'34 opposition -160 Oct 24 j 17:58 28°**Y**'41'43 0°-27'-41 min. Earth dist. -160 Oct 24 j 15:20 28°**Y**41'59 18.53615 AU -167 Mar 21 j 23:22 27°**)**(49'36 0°-40'-6 direct -159 Jan 07 j 07:29 26°**Y**42'27 conjunction minimum elong -167 Mar 21 j 23:22 27°**)** 49'36 0°40'07 -159 Apr 11 j 21:16 0° 8

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 17 Attention, astronomical year style is used: The year -159 in astronomical counting style is the year 160 BCE in historical counting style. 0°**8**45'43 0°-23'-40 -152 Feb 06 i 17:51 conjunction -159 Apr 25 j 01:10 direct 26°**8**45'35 minimum elong -159 Apr 25 i 01:10 0°845'43 0°23'41 -152 May 09 j 19:29 $\Pi^{\circ}0$ max. Earth dist. -159 Apr 25 j 02:13 0°845'53 20.50693 AU -159 Aug 14 j 04:00 4°855'52 -152 May 26 j 09:38 0°**Ц**58'51 0°-1'-47 retrograde conjunction -159 Oct 29 j 03:35 2°**8**54'45 0°-24'-39 minimum elong -152 May 26 j 09:37 0°Ⅲ58'51 0°01'48 opposition -159 Oct 29 j 03:54 2°854'43 18.47679 AU -152 May 26 j 02:50 0°**I**57′52 min. Earth dist. behind sun begin 0°**Ⅱ**59'50 -158 Jan 11 j 16:06 -152 May 26 j 16:24 direct 0°**8**55'09 behind sun end 0°**Д**56'46 20.05000 AU max. Earth dist. -152 May 25 j 19:38 -158 Apr 29 j 17:14 4°859'46 0°-20'-51 -152 Sep 13 j 19:44 conjunction retrograde 5°**Ⅲ**14'27 -158 Apr 29 j 17:15 4°**8**59'46 -152 Nov 27 j 13:44 3°**I**12'20 0°00'-2 minimum elong 0°20'52 opposition -158 Apr 29 j 15:58 3°**Ⅱ**11'06 18.01733 AU max. Earth dist. 4°**8**59'35 20.44620 AU min. Earth dist. -152 Nov 28 j 01:19 -158 Aug 18 j 19:35 9°**8**10'42 -152 Dec 03 j 05:40 2°**I**57'46 retrograde asc. node -158 Nov 02 j 13:39 7°**8**09'28 0°-21'-28 -151 Feb 10 j 09:36 1°**Ⅱ**09'52 opposition direct min. Earth dist. -158 Nov 02 j 15:05 7°**8**09'19 18.41460 AU direct -157 Jan 16 j 03:12 5°**8**09'30 conjunction -151 May 31 j 07:15 5°**Ⅱ**24'40 0°01'42 minimum elong -151 May 31 j 07:15 5°**Ⅲ**24'40 0°01'42 conjunction -157 May 04 j 09:59 9°**8**15'29 0°-17'-55 behind sun begin -151 May 31 j 00:27 5°**Ⅲ**23'41 minimum elong -157 May 04 j 09:59 9°**8**15'29 0°17'56 behind sun end -151 May 31 j 14:02 5°**Ⅱ**25'39 max. Earth dist. -157 May 04 j 06:25 9°**8**14'58 20.38267 AU max. Earth dist. -151 May 30 j 16:21 5°**П**22'27 19.98526 AU retrograde -157 Aug 23 j 09:53 13°**8**27'12 retrograde -151 Sep 18 j 13:18 9°**Ⅱ**41'01 opposition -157 Nov 07 j 00:22 11°**8**25'49 0°-18'-9 opposition -151 Dec 02 j 03:58 7°**Ⅱ**38'51 0°03'43 min. Earth dist. -157 Nov 07 i 04:32 11°**8**25'23 18.34998 AU min. Earth dist. -151 Dec 02 j 17:20 7°**П**37'24 17.95354 AU direct -156 Jan 20 j 13:36 9°**8**25'27 direct -150 Feb 15 j 01:01 5°**Ⅱ**36'00 conjunction -156 May 08 i 03:33 13°832'50 0°-14'-51 conjunction -150 Jun 05 i 05:30 9°**∏**52'20 0°05'07 minimum elong -156 May 08 i 03:33 13°**8**32'50 0°14'53 minimum elong -150 Jun 05 j 05:29 9°**Ⅱ**52'20 0°05'07 behind sun begin -156 May 08 j 01:15 13°832'30 behind sun begin -150 Jun 04 j 22:55 9°**I**151′22 behind sun end -156 May 08 j 05:51 13°833'10 behind sun end -150 Jun 05 j 12:04 9°**Ⅲ**53'18 max. Earth dist. -156 May 07 j 21:37 13°**8**31'59 20.31728 AU max. Earth dist. -150 Jun 04 j 12:03 9°**П**49'43 19.92257 AU -156 Jun 02 j 08:20 -150 Sep 23 j 08:07 retrograde 14°**Ⅱ**09'26 15°8 -156 Aug 27 j 02:02 opposition -150 Dec 06 j 18:59 17°845'20 12°**I**07'13 0°07'30 retrograde -156 Nov 10 j 11:22 15°**8**43'48 0°-14'-42 -150 Dec 07 j 09:18 min. Earth dist. 12°**耳**05'40 17.89199 AU opposition -156 Nov 10 j 16:36 15°**8**43'15 18.28383 AU -149 Feb 19 j 18:40 10°**Ⅲ**04'01 min. Earth dist. direct -149 Jun 09 j 10:38 -156 Nov 28 j 01:12 14°**Д**19'13 19.86203 AU 15°R₩ max. Earth dist. -155 Jan 24 j 01:55 13°**8**43'01 direct -155 Mar 20 j 13:49 -149 Jun 10 j 04:29 14°**Ⅲ**21'54 15°8 0°08'30 conjunction -149 Jun 10 j 04:29 14°**Ⅲ**21'54 0°08'30 minimum elong conjunction -155 May 12 j 21:59 17°**8**51'50 0°-11'-42 behind sun begin -149 Jun 09 j 22:35 14°**Ⅲ**21′02 minimum elong -155 May 12 j 22:00 17°**8**51'50 0°11'43 behind sun end -149 Jun 10 j 10:23 14°**Ⅲ**22'46 -149 Sep 28 j 03:12 behind sun begin -155 May 12 j 17:18 17°**8**51'10 retrograde 18°**Ⅲ**39'45 behind sun end -155 May 13 j 02:41 17°**8**52'30 opposition -149 Dec 11 j 10:49 16°**耳**37'31 0°11'16 max. Earth dist. -155 May 12 j 14:11 17°**8**50'42 20.25050 AU min. Earth dist. -149 Dec 12 j 02:37 16°**耳**35'49 17.83259 AU retrograde -155 Aug 31 j 17:26 22°805'06 direct -148 Feb 24 j 11:47 14°**Ⅲ**34'01 -155 Nov 14 j 23:07 20°803'25 0°-11'-8 max. Earth dist. -148 Jun 13 j 07:45 18°**Ц**50'18 19.80379 AU opposition min. Earth dist. -155 Nov 15 j 06:50 20°802'35 18.21668 AU -154 Jan 28 j 14:06 -148 Jun 14 i 04:15 18°**I**53'24 0°11'52 direct 18°**8**02'12 conjunction -148 Jun 14 i 04:14 minimum elong 18°**Ⅲ**53'24 0°11'52 -154 May 17 j 17:08 22°**8**12'29 -148 Jun 13 j 23:38 18°**Ⅱ**52'43 conjunction 0°-8'-28 behind sun begin -154 May 17 j 17:08 -148 Jun 14 i 08:51 18°**Ⅱ**54'05 minimum elong 22°**8**12'29 0°08'29 behind sun end -154 May 17 i 11:14 behind sun begin 22°811'38 retrograde -148 Oct 01 j 23:28 23°II11'59 behind sun end -154 May 17 i 23:02 22°813'20 opposition -148 Dec 15 i 03:16 21°II09'45 0°15'00 max. Earth dist. -154 May 17 i 06:53 22°810'59 20.18325 AU min. Earth dist. -148 Dec 15 j 20:23 21°**II**07'54 17.77548 AU retrograde -154 Sep 05 j 09:59 26°**8**26'32 direct -147 Feb 28 j 06:44 19°**Ⅱ**05'56 -154 Nov 19 i 11:15 24°**8**24'41 0°-7'-30 -147 Jun 18 j 08:04 23°**Ц**23'39 19.74755 AU opposition max. Earth dist. -154 Nov 19 j 19:55 min. Earth dist. 24°**8**23'45 18.14945 AU -147 Jun 19 j 05:01 direct -153 Feb 02 j 03:57 22°**8**23'02 conjunction 23°II26'49 0°15'11 -147 Jun 19 j 05:00 minimum elong 23°**Ⅱ**26'49 0°15'11 -147 Jun 19 j 03:09 -153 May 22 j 13:06 26°834'48 0°-5'-10 behind sun begin 23°**II**26'33 conjunction -153 May 22 j 13:06 26°**8**34'48 0°05'10 behind sun end -147 Jun 19 j 06:52 $23^{\circ}\Pi 27'06$ minimum elong -153 May 22 j 06:32 26°**8**33'51 retrograde -147 Oct 06 j 20:36 27°**Ⅱ**46′04 behind sun begin -153 May 22 j 19:40 26°**8**35'45 -147 Dec 19 j 20:42 25°**Ⅱ**43'52 behind sun end opposition 0°18'40 -153 May 22 j 01:32 max. Earth dist. 26°**8**33'06 20.11611 AU min. Earth dist. -147 Dec 20 j 15:08 25°**Ⅱ**41'52 17.72018 AU -153 Jul 27 j 22:45 Π °0 direct -146 Mar 05 j 02:01 23°**Ⅲ**39'45 retrograde -153 Sep 10 j 02:26 0°**Ⅱ**49'37 max. Earth dist. -146 Jun 23 j 06:29 27°**I**158'28 19.69314 AU -153 Oct 24 j 20:50 30°R₩ -153 Nov 24 j 00:12 28°847'39 0°-3'-48 -146 Jun 24 j 06:10 28° II 02'04 0° 18'26 opposition conjunction min. Earth dist. -153 Nov 24 j 10:55 28°**8**46'29 18.08274 AU -146 Jun 24 j 06:10 28° II 02'04 0° 18'27 minimum elong

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Earth dist. -145 Jun 28 j 08:07 2°535'21 19.64065 AU conjunction -137 Aug 07 j 09:28 10°**Ω**17'38 0°40'29 conjunction -145 Jun 29 j 08:08 2°939'01 0°21'35 minimum elong -137 Aug 07 j 09:28 10°**Ω**17'38 0°40'28 minimum elong -145 Jun 29 j 08:07 2°539'01 0°21'35 retrograde -137 Nov 23 j 08:33 14°**Ω**40'32 -145 Oct 16 j 16:28 -136 Feb 04 j 16:40 retrograde 6°959'29 opposition 12°**Ω**38′12 0°45'53 -145 Dec 29 j 09:51 -136 Feb 05 j 15:44 opposition 4°957'16 0°25'42 min. Earth dist. 12°**Ω**35'41 17.33843 AU min. Earth dist. -145 Dec 30 j 06:39 4°955'00 17.61538 AU direct -136 Apr 20 j 23:56 10°**Ω**31'43 direct -144 Mar 13 j 19:43 2°952'31 max. Earth dist. -136 Aug 10 j 10:19 14°**Ω**59'14 19.33230 AU max. Earth dist. -144 Jul 02 j 07:59 7°9513'27 19.59029 AU -136 Aug 10 j 15:12 15°**Ω** conjunction -144 Jul 03 j 10:24 7°9517'30 0°24'37 conjunction -136 Aug 11 j 12:57 15°**Ω**03′25 0°41'46 minimum elong -144 Jul 03 j 10:24 7°9517'30 0°24'37 minimum elong -136 Aug 11 j 12:57 15°**Ω**03'25 0°41'46 retrograde -144 Oct 20 j 13:57 11°538'30 retrograde -136 Nov 27 j 07:07 19°**Ω**26'21 opposition -143 Jan 02 j 05:35 9°536'14 0°29'01 opposition -135 Feb 08 j 17:06 17°**Ω**24'07 0°47'10 min. Earth dist. -143 Jan 03 i 03:57 9°933'48 17.56633 AU min. Earth dist. -135 Feb 09 i 16:36 17°**Ω**21'34 17.32872 AU direct -143 Mar 18 j 17:06 7°931'10 direct -135 Apr 26 j 01:57 15°**Ω**17'39 max. Earth dist. -143 Jul 07 i 10:44 11°553'18 19.54251 AU conjunction -135 Aug 16 j 16:06 19°**Ω**49'38 0°42'46 -143 Jul 08 i 13:18 11°957'23 0°27'30 minimum elong -135 Aug 16 j 16:06 19°Ω49'38 0°42'47 conjunction -143 Jul 08 j 13:18 11°957'23 max. Earth dist. -135 Aug 15 j 13:29 19°**Ω**45'27 19.32570 AU minimum elong 0°27'31 -143 Oct 25 j 13:50 retrograde -135 Dec 02 j 08:11 24°Ω12'33 retrograde 16°9318'50 -142 Jan 07 j 01:53 opposition -134 Feb 13 j 17:48 22°Ω10'27 0°48'07 opposition 14°9516'32 0°32'09 min. Earth dist. -142 Jan 08 j 00:35 min. Earth dist. -134 Feb 14 j 15:48 22° **Ω**08'04 17.32503 AU 14°5514'04 17.52000 AU -142 Mar 23 j 16:46 12°9511'11 -134 May 01 j 06:13 20°**Ω**04'02 direct direct 24°**Ω**36'11 0°43'29 -142 Jul 13 j 16:24 conjunction 16°538'30 0°30'13 conjunction -134 Aug 21 j 19:13 -142 Jul 13 j 16:24 -134 Aug 21 j 19:13 24° Ω36'11 0°43'29 minimum elong 16°938'30 0°30'13 minimum elong -134 Aug 20 j 18:28 -142 Jul 12 j 12:11 24°**Ω**32'18 19.32483 AU max. Earth dist. 16°**©**34'09 19.49784 AU max. Earth dist. -142 Oct 30 j 11:24 -134 Dec 07 j 07:41 28°**Ω**58'59 retrograde 21°9500'21 retrograde -141 Jan 11 j 23:00 -133 Feb 18 j 19:05 26°**Ω**57'02 0°48'45 opposition 18°958'01 0°35'04 opposition min. Earth dist. -141 Jan 12 j 23:05 18°555'23 17.47731 AU min. Earth dist. -133 Feb 19 j 17:13 26° **Ω**54'38 17.32690 AU direct -141 Mar 28 j 15:16 16°952'21 direct -133 May 06 j 08:24 24°**Ω**50'42 conjunction -141 Jul 18 j 19:35 21°520'42 0°32'44 conjunction -133 Aug 26 j 21:47 29°**Ω**22'51 0°43'53 -141 Jul 18 j 19:35 21°520'42 0°32'44 minimum elong -133 Aug 26 j 21:47 29°Ω22'51 0°43'54 minimum elong max. Earth dist. -141 Jul 17 j 15:32 21°5016'21 19.45712 AU max. Earth dist. -133 Aug 25 j 20:54 29° **Ω**18'56 19.32937 AU -141 Nov 04 j 11:49 25°9542'53 -133 Sep 05 j 17:55 retrograde -140 Jan 16 j 20:35 23°5540'30 0°37'46 retrograde -133 Dec 12 j 09:04 3° m/45'29 opposition -140 Jan 17 j 20:17 -132 Feb 23 i 20:33 1° m 43'39 0°49'03 min. Earth dist. 23°537'55 17.43871 AU opposition -140 Apr 01 i 16:26 -132 Feb 24 i 17:15 direct 21°934'35 min. Earth dist. 1° m 41'24 17.33393 AU -132 Apr 10 j 18:10 30°RΩ -140 Jul 22 j 23:04 conjunction 26°503'50 0°35'02 direct -132 May 10 j 12:31 29°**Ω**37'24 minimum elong -140 Jul 22 i 23:04 26°903'50 0°35'02 -132 Jun 08 i 19:56 0°m max. Earth dist. -140 Jul 21 i 18:20 25°\$59'22 19.42078 AU max. Earth dist. -132 Aug 30 j 01:30 4° m 05'49 19.33874 AU -140 Oct 08 j 15:21 0° Ω -140 Nov 08 j 09:27 0°Ω26'17 conjunction -132 Aug 31 j 00:17 4° m 09'25 0°44'00 retrograde -140 Dec 09 j 14:15 -132 Aug 31 j 00:17 30°R95 minimum elong 4°m/09'25 0°43'59 -139 Jan 20 j 18:46 -132 Dec 16 j 08:43 opposition 28°523'52 0°40'13 retrograde 8° Mp 31'45 min. Earth dist. -139 Jan 21 j 19:39 28°9521'09 17.40499 AU opposition -131 Feb 27 j 22:19 6° Mp 30'03 0°49'00 direct -139 Apr 06 j 16:11 26°9517'43 min. Earth dist. -131 Feb 28 j 18:46 6° Mp 27'50 17.34555 AU -139 Jul 15 j 07:03 0° Ω -131 May 15 j 15:06 direct 4° m 23'55 -139 Jul 26 j 22:04 -131 Sep 04 j 03:21 8° m 52'01 19.35270 AU max. Earth dist. 0°**Ω**43'19 19.38970 AU max. Earth dist. -139 Jul 28 j 02:37 0°**Ω**47'46 0°37'06 -131 Sep 05 j 02:10 conjunction conjunction 8° m 55'37 0°43'48 minimum elong -139 Jul 28 j 02:37 0°**Ω**47'46 0°37'06 minimum elong -131 Sep 05 j 02:10 8° m 55'37 0°43'48 retrograde -139 Nov 13 j 10:03 5°**Ω**10′25 retrograde -131 Dec 21 j 09:23 13° m 17'37 opposition -138 Jan 25 j 17:32 3°**Ω**08'00 0°42'23 opposition -130 Mar 05 j 00:18 11°Mp 16'00 0°48'36 min. Earth dist. -138 Jan 26 j 17:22 3°**Ω**05'24 17.37667 AU min. Earth dist. -130 Mar 05 j 19:23 11° Mp 13'56 17.36177 AU -138 Apr 11 j 19:03 1°201'41 -130 May 20 j 19:20 direct direct max. Earth dist. -138 Aug 01 j 01:59 5°**Ω**28'01 19.36423 AU max. Earth dist. -130 Sep 09 j 07:03 13° M 37'59 19.37107 AU

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Earth dist. 18° m 22'50 19.39369 AU -121 Oct 22 j 04:09 conjunction 25°**≏**36'28 0°26'59 -129 Sep 15 j 04:08 -121 Oct 22 j 04:09 conjunction 18° Mp 26'00 0°42'30 minimum elong 25°**≏**36'28 0°26'59 -129 Sep 15 j 04:08 -121 Oct 22 j 01:26 minimum elong 18° Mp 26'00 0°42'29 max. Earth dist. 25°**2**36'03 19.73760 AU -129 Dec 31 j 07:32 retrograde 22° Mp 47'05retrograde -120 Feb 06 j 04:05 29°**♀**52'08 -128 Mar 14 j 04:11 20° Mp 45'36 0°46'49 -120 Apr 21 j 11:04 opposition opposition 27°**♀**51'30 0°28'29 -128 Mar 14 j 21:10 -120 Apr 21 j 13:07 min. Earth dist. 20° Mp 43'47 17.40696 AU min. Earth dist. 27°**♀**51'17 17.76768 AU -120 Jul 07 j 16:49 direct -128 May 30 j 02:59 18° m 39'53 direct 25°**-**48'12 max. Earth dist. -128 Sep 18 j 10:34 23°M)06'57 19.42066 AU -120 Oct 23 j 14:00 0°M conjunction -128 Sep 19 j 04:14 23° m 09'44 0°41'25 conjunction -120 Oct 25 j 21:24 0°M08'36 0°24'10 minimum elong -128 Sep 19 j 04:14 23°M)09'44 0°41'25 minimum elong -120 Oct 25 j 21:24 0°ML08'36 0°24'10 retrograde -127 Jan 04 j 05:37 27° m 30'16 max. Earth dist. -120 Oct 25 j 20:16 0°ML08'26 19.79863 AU opposition -127 Mar 19 j 06:06 25° m 28'49 0°45'27 retrograde -119 Feb 10 j 00:14 4°M23'31 min. Earth dist. -127 Mar 19 j 21:25 25° m) 27'11 17.43594 AU opposition -119 Apr 26 j 10:10 2°M23'03 0°25'15 direct -127 Jun 04 i 07:19 23°m 23'17 min. Earth dist. -119 Apr 26 i 09:12 2°M23'09 17.82973 AU max. Earth dist. -127 Sep 23 j 10:42 27° m 49'38 19.45192 AU direct -119 Jul 12 j 16:28 0°M20'12 conjunction -127 Sep 24 i 03:16 27° m 52'14 0°40'03 conjunction -119 Oct 30 i 13:49 4°M39'10 0°21'13 minimum elong -127 Sep 24 i 03:16 27° m 52'14 0°40'03 minimum elong -119 Oct 30 i 13:49 4°M39'10 0°21'12 -127 Oct 29 i 08:39 0∘**⊽** max. Earth dist. -119 Oct 30 j 15:27 4°ML39'25 19.86157 AU -126 Jan 09 j 03:10 2°**₽**12'10 retrograde -118 Feb 14 j 18:00 8°M53'19 retrograde opposition -126 Mar 24 j 07:51 0°**2**10'45 0°43'46 opposition -118 May 01 j 08:56 6°M53'01 0°21'53 -126 Mar 24 j 21:54 min. Earth dist. 0°**2**09'15 17.46952 AU min. Earth dist. -118 May 01 j 07:06 6°M53'13 17.89343 AU -126 Mar 28 j 12:49 -118 Jul 17 j 13:15 30°R, Mp direct 4°M50'36 -126 Jun 09 j 10:29 28° Mp 05'24 direct -118 Nov 04 j 05:27 -126 Aug 16 j 19:18 9°M08'05 0°18'08 0∘Ω conjunction max. Earth dist. -126 Sep 28 j 11:37 2°**2**31'09 19.48790 AU -118 Nov 04 j 05:27 minimum elong 9°M08'05 0°18'09 -118 Nov 04 j 08:14 max. Earth dist. 9°M08'30 19.92587 AU -117 Feb 19 j 12:43 -126 Sep 29 j 01:35 13° ML21'26conjunction 2°**2**33'20 0°38'25 retrograde -126 Sep 29 j 01:35 -117 May 06 j 06:46 minimum elong 2°**£**33'20 0°38'26 opposition 11°M21'18 0°18'24 retrograde -125 Jan 14 j 00:39 6°**£**52'36 min. Earth dist. -117 May 06 j 02:12 11°M21'46 17.95810 AU opposition -125 Mar 29 j 09:12 4°**2**51'15 0°41'48 direct -117 Jul 22 j 11:35 9°M19'17 min. Earth dist. -125 Mar 29 j 20:49 4°**♀**50'01 17.50777 AU -117 Nov 08 j 20:25 direct -125 Jun 14 j 14:15 2°**£**46'07 conjunction 13°M35'17 0°14'59 minimum elong -117 Nov 08 j 20:25 13°MJ35'17 0°14'58 -125 Oct 03 j 22:58 7°**2**12'57 0°36'33 behind sun begin -117 Nov 08 j 17:46 13°M34'53 conjunction -125 Oct 03 j 22:58 7°**2**12'57 0°36'33 behind sun end -117 Nov 08 j 23:04 13°M35'41 minimum elong max. Earth dist. -125 Oct 03 j 10:48 7°**2**11'03 19.52862 AU max. Earth dist. -117 Nov 09 j 01:49 13°M36'06 19.99067 AU -124 Jan 18 j 20:52 -117 Dec 02 i 05:45 retrograde 11°**△**31'32 15°M -124 Apr 02 j 10:23 -116 Feb 24 i 05:25 opposition 9°**2**30'15 0°39'35 retrograde 17°M47'49 -124 Apr 02 j 20:41 min. Earth dist. 9°**2**29'10 17.55098 AU opposition -116 May 10 j 04:17 15°M47'48 0°14'50 direct -124 Jun 18 j 15:45 7°**£**25'24 min. Earth dist. -116 May 09 j 22:56 15°ML48'21 18.02296 AU -116 May 30 i 01:41 15°RML -124 Oct 07 i 19:31 conjunction 11°**♀**51'04 0°34'27 direct -116 Jul 26 j 07:54 13°ML46'12 minimum elong -124 Oct 07 i 19:31 11°**♀**51'04 0°34'27 -116 Sep 18 j 18:45 15°M₁ max. Earth dist. -124 Oct 07 j 09:47 11°**≏**49'32 19.57432 AU -123 Jan 22 j 17:53 retrograde 16°**♀**08'56 conjunction -116 Nov 12 j 10:20 18°M00'39 0°11'45 -123 Apr 07 j 11:05 opposition 14°**2**07'46 0°37'07 minimum elong -116 Nov 12 j 10:20 18°**M**₀00'39 0°11'45 min. Earth dist. -123 Apr 07 j 18:25 14°**೨**07'00 17.59894 AU behind sun begin -116 Nov 12 j 05:39 17°M59'57 direct -123 Jun 23 j 18:29 12°**2**03'15 behind sun end -116 Nov 12 j 15:01 18°M01'21 -116 Nov 12 j 16:33 max. Earth dist. 18°ML01'35 20.05553 AU -123 Oct 12 j 15:17 16°**≙**27'40 0°32'09 retrograde -115 Feb 27 j 22:28 conjunction 22°M12'23 -123 Oct 12 j 15:17 0°32'09 -115 May 15 j 01:02 0°11'12 minimum elong 16°**£**27'40 opposition 20°M₁2'28 -123 Oct 12 j 07:53 min. Earth dist. max. Earth dist. 16°**≏**26'31 19.62468 AU -115 May 14 j 17:05 20°M13'17 18.08768 AU -122 Jan 27 j 13:06 retrograde 20°**£**44′50 direct -115 Jul 31 j 04:47 18°**M**₊11'14 opposition -122 Apr 12 j 11:38 18°**≙**43'49 0°34'26 min. Earth dist. -122 Apr 12 j 17:42 18°**2**43'11 17.65155 AU conjunction -115 Nov 16 j 23:39 22°M24'08 0°08'28 direct -122 Jun 28 j 17:53 16°**♀**39'41 minimum elong -115 Nov 16 j 23:39 22°M24'08 0°08'28 behind sun begin -115 Nov 16 j 17:53 22°M23'17 -122 Oct 17 j 10:02 21°**⊆**02'48 0°29'39 behind sun end -115 Nov 17 j 05:25 22° M $_{2}5'00$ conjunction

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -115 in astronomical counting style is the year 116 BCE in historical counting style. -115 Nov 17 i 08:35 22°M25'29 20.12000 AU max. Earth dist. opposition -108 Jun 15 i 05:15 20°**₹**11'12 0°-14'-3 26°M35'02 -114 Mar 04 i 13:32 direct -108 Aug 31 j 00:56 18°**∡**12'19 retrograde -114 May 19 j 21:08 24°MJ35'11 0°07'31 opposition min. Earth dist. -114 May 19 j 12:16 -108 Dec 15 j 22:12 22°**₹**15'06 0°-14'-14 24°M36'05 18.15191 AU conjunction -114 Aug 05 j 00:25 -108 Dec 15 j 22:12 22°**∡**15′06 0°14'15 direct 22°M34'18 minimum elong -108 Dec 15 j 18:56 22°**х** 14'37 behind sun begin 22°**∡**15'34 -114 Nov 21 j 11:53 -108 Dec 16 j 01:28 conjunction 26°M45'39 0°05'11 behind sun end -114 Nov 21 j 11:52 -108 Dec 16 j 18:07 minimum elong 26°M45'39 0°05'11 max. Earth dist. 22°**✗**18'03 20.56102 AU -114 Nov 21 j 05:32 -107 Apr 03 j 09:00 behind sun begin 26°M44'42 retrograde 26°**х** 20′50 -114 Nov 21 j 18:13 -107 Jun 19 j 20:14 behind sun end 26°M46'35 opposition 24°**₹**′21′28 0°-17'-25 max. Earth dist. -114 Nov 21 j 21:31 26°M47'05 20.18404 AU min. Earth dist. -107 Jun 18 j 23:29 24°**✗**23'33 18.59117 AU -113 Jan 21 j 09:19 -107 Sep 04 j 13:03 22°**х** 22'57 0°**∡**¹ direct -113 Mar 09 j 04:36 retrograde 0°**х** 55'43 -107 Dec 20 j 06:02 -113 Apr 27 j 01:36 30°RM conjunction 26°**∡**¹24'31 0°-17'-13 opposition -113 May 24 j 16:21 28°M55'54 0°03'50 minimum elong -107 Dec 20 j 06:02 26°**х**⁴24'31 0°17'14 min. Earth dist. -113 May 24 j 05:06 28°M57'03 18.21573 AU max. Earth dist. -107 Dec 21 j 04:21 26°**✗**27'49 20.62065 AU direct -113 Aug 09 j 19:10 26°M55'20 -106 Mar 04 j 07:08 0°궁 -113 Nov 07 j 20:41 0°×7 retrograde -106 Apr 07 j 19:52 0°る29'41 -106 May 13 j 09:19 30°₽**⋌** conjunction -113 Nov 25 j 23:27 1°**∡**°05′08 0°01'51 opposition -106 Jun 24 j 10:25 28°**₹**30'26 0°-20'-40 minimum elong -113 Nov 25 j 23:28 1°**₹**05'08 0°01'51 min. Earth dist. -106 Jun 23 j 12:31 28°**✗**32'38 18.64969 AU behind sun begin -113 Nov 25 i 16:55 1°**х** 04′10 direct -106 Sep 09 i 01:38 26°**х** 32′17 behind sun end -113 Nov 26 j 06:00 1°**х** 06′06 -106 Dec 15 j 07:21 0°궁 max. Earth dist. -113 Nov 26 j 11:56 1°**≯**07'01 20.24758 AU retrograde -112 Mar 12 j 18:01 5°**х¹**14'23 conjunction -106 Dec 24 i 13:16 0°る32'42 0°-20'-6 opposition -112 May 28 i 10:47 3°**҂**14'36 0°00'10 minimum elong -106 Dec 24 i 13:16 0°る32'42 0°20'07 min. Earth dist. -112 May 27 i 22:22 3°**₹**15'52 18.27911 AU max. Earth dist. -106 Dec 25 j 11:36 0°る35'59 20.67790 AU desc. node -112 Jun 13 j 17:53 2°×35'31 retrograde -105 Apr 12 j 07:25 4°る37'21 -112 Aug 13 j 13:07 1°**√**14'21 min. Earth dist. -105 Jun 28 j 01:28 2°る40'28 18.70560 AU direct -105 Jun 29 j 00:05 2°る38'12 0°-23'-48 opposition -112 Nov 29 j 10:05 -105 Sep 13 j 11:46 5°**₹**22'38 0°-1'-32 0°る40'22 conjunction direct -112 Nov 29 j 10:05 0°01'34 minimum elong 5°**х** 22′38 -112 Nov 29 j 03:33 -105 Dec 28 j 20:16 4°る39'43 0°-22'-52 behind sun begin 5°**₹**21'41 conjunction -112 Nov 29 j 16:37 -105 Dec 28 j 20:16 4°る39'43 0°22'55 5°**х** 23′36 minimum elong behind sun end -112 Nov 29 j 23:20 -105 Dec 29 j 20:33 4°る43'17 20.73205 AU 5°**尽**24'38 20.31093 AU max. Earth dist. max. Earth dist. -104 Apr 15 j 17:50 8°**る**43'52 -111 Mar 17 j 07:44 9°**х** 31′06 retrograde retrograde -104 Jul 02 j 13:05 -111 Jun 02 j 04:33 7°**х** 31'22 0°-3'-28 6°る44'51 0°-26'-48 opposition opposition min. Earth dist. -111 Jun 01 j 13:49 7°**≯**32'51 18.34252 AU min. Earth dist. -104 Jul 01 j 13:33 6°る47'12 18.75796 AU direct -111 Aug 18 j 05:24 5°**х**³31'25 direct -104 Sep 16 j 23:34 4°**る**47'19 -111 Dec 03 j 20:04 -103 Jan 01 j 02:53 conjunction 9°**∡**38'15 0°-4'-49 conjunction 8°る45'39 0°-25'-31 minimum elong -111 Dec 03 j 20:04 9°**∡**38'15 0°04'50 minimum elong -103 Jan 01 j 02:53 8°る45'39 0°25'32 8°る49'08 20.78250 AU behind sun begin -111 Dec 03 j 13:42 9°**∡**37'19 max. Earth dist. -103 Jan 02 j 02:47 behind sun end -111 Dec 04 j 02:27 9°**∡**39'11 retrograde -103 Apr 20 j 04:31 12°る49'22 max. Earth dist. -111 Dec 04 j 12:17 9°**∡**¹40'40 20.37419 AU min. Earth dist. -103 Jul 06 j 01:55 10°る52'46 18.80648 AU -110 Mar 21 i 19:59 13°**∡** 45′57 -103 Jul 07 i 01:38 10°る50'24 0°-29'-39 retrograde opposition -110 Jun 06 j 21:35 -103 Sep 21 j 08:09 8°る53'08 opposition 11°**∡**¹46'17 0°-7'-4 direct -110 Jun 06 i 05:26 min. Earth dist. 11°**₹**'47'55 18.40569 AU -110 Aug 22 j 21:09 -102 Jan 05 i 09:20 12°る50'30 0°-28'-2 direct 9°×746'41 conjunction -102 Jan 05 i 09:20 minimum elong 12°る50'30 0°28'03 conjunction -110 Dec 08 i 05:23 -102 Jan 06 i 10:46 13°**₹** 52'06 0°-8'-1 max. Earth dist. 12°る54'13 20.82872 AU -102 Apr 24 j 14:27 -110 Dec 08 i 05:22 minimum elong 13°**х** 52′06 0°08'03 retrograde 16°**ප**53'49 behind sun begin -110 Dec 07 j 23:31 13°**∡**'51'15 opposition -102 Jul 11 j 13:28 14°る54'53 0°-32'-20 -110 Dec 08 j 11:13 -102 Jul 10 j 13:01 behind sun end 13°**х** 52′57 min. Earth dist. 14°る57'19 18.85036 AU -102 Sep 25 j 18:57 -110 Dec 08 j 22:10 max. Earth dist. 13°**尽**54'36 20.43724 AU direct 12°る57'50 -109 Mar 26 j 09:06 retrograde 17°**₹**59'06 -109 Jun 11 j 13:40 -101 Jan 09 j 15:24 opposition 15°**₹**'59'31 0°-10'-36 conjunction 16°る54'19 0°-30'-23 -101 Jan 09 j 15:24 min. Earth dist. -109 Jun 10 j 19:40 16°**✗**01'20 18.46859 AU minimum elong 16°**る**54'19 0°30'24 -101 Jan 10 j 16:03 -109 Aug 27 j 11:04 14°**₹**00′15 max. Earth dist. 16°る57'54 20.87022 AU direct retrograde -101 Apr 29 j 00:14 20°る57'14 -101 Jul 15 j 00:30 -109 Dec 12 j 14:12 18°**✗**'04'20 0°-11'-10 19°る00'43 18.88958 AU conjunction min. Earth dist. -109 Dec 12 j 14:12 -101 Jul 16 j 00:39 minimum elong 18°**₹**04'20 0°11'10 opposition 18°**る**58'18 0°-34'-50 -109 Dec 12 j 09:17 behind sun begin 18°**х** 03'37 direct -101 Sep 30 j 02:44 17°**る**01'24 -109 Dec 12 j 19:07 behind sun end 18°**₹**05'03 max. Earth dist. -109 Dec 13 j 09:41 18°**✗**07'14 20.49969 AU conjunction -100 Jan 13 j 21:18 20°る57'04 0°-32'-34 retrograde -108 Mar 29 j 20:27 22°**х** 10′40 minimum elong -100 Jan 13 j 21:18 20°る57'04 0°32'36 min. Earth dist. -108 Jun 14 j 09:52 20°**✗**13'09 18.53051 AU max. Earth dist. -100 Jan 14 j 23:16 21°る00'50 20.90709 AU

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 21 Attention, astronomical year style is used: The year -100 in astronomical counting style is the year 101 BCE in historical counting style. 24°**る**59'37 -100 May 02 j 09:24 max. Earth dist. -92 Feb 15 i 17:47 22°≈56'51 21.06245 AU retrograde min. Earth dist. -100 Jul 18 i 10:20 23°る03'09 18.92415 AU -92 Jun 04 j 07:03 retrograde 26°≈54'51 opposition -100 Jul 19 j 11:16 23°**る**00'39 0°-37'-10 min. Earth dist. -92 Aug 20 j 07:02 24°≈58'01 19.06428 AU -100 Oct 03 j 12:07 21°る03'55 direct -92 Aug 21 j 07:12 24°≈55'35 0°-48'-16 opposition -92 Nov 04 j 14:45 direct 22°≈59'27 24°る58'47 0°-34'-35 -99 Jan 17 j 02:36 conjunction 26°≈51'37 0°-43'-53 -99 Jan 17 j 02:36 -91 Feb 17 j 21:07 minimum elong 24°る58'47 0°34'37 conjunction max. Earth dist. -99 Jan 18 j 03:56 -91 Feb 17 j 21:07 25°る02'27 20.93951 AU minimum elong 26°≈51'37 0°43'54 -91 Feb 18 j 21:54 26°≈55'09 21.06399 AU retrograde -99 May 06 j 18:40 29°**る**01'03 max. Earth dist. -99 Jul 23 j 21:25 opposition 27°**る**02'01 0°-39'-17 -91 Apr 21 j 19:16 0°**)**€ min. Earth dist. -99 Jul 22 j 20:51 27°る04'28 18.95463 AU retrograde -91 Jun 08 j 14:35 0°**¥**53'34 -99 Oct 07 j 19:12 -91 Jul 27 j 17:22 direct 25°る05'22 30°R≈ -91 Aug 25 j 14:34 opposition 28°≈54'15 0°-48'-39 conjunction -98 Jan 21 j 08:02 28°る59'34 0°-36'-26 min. Earth dist. -91 Aug 24 j 16:09 28°≈56'31 19.06339 AU minimum elong -98 Jan 21 j 08:01 28°る59'34 0°36'27 direct -91 Nov 08 j 18:35 26°≈58'07 max. Earth dist. -98 Jan 22 j 10:40 29°る03'25 20.96798 AU -90 Feb 07 j 08:22 0°**)**€ -98 Feb 07 j 22:11 0°≈ retrograde -98 May 11 j 03:16 3°≈01'34 conjunction -90 Feb 22 j 03:31 0°**)** 50'22 0°-44'-8 min. Earth dist. -98 Jul 27 j 05:20 1°≈05'01 18.98121 AU minimum elong -90 Feb 22 j 03:31 0°**)** 50′22 0°44'09 opposition -98 Jul 28 j 06:42 1°≈02'29 0°-41'-13 max. Earth dist. -90 Feb 23 j 04:16 0° **€**53'54 21.06050 AU -98 Aug 24 j 17:35 30°Rる retrograde -90 Jun 12 j 23:58 4°**)** 52'31 direct -98 Oct 12 i 03:05 29°る05'55 opposition -90 Aug 29 j 21:28 2°\f53'10 0°-48'-49 -98 Nov 27 j 15:41 0°≈ min. Earth dist. -90 Aug 28 i 23:17 2°**升**55'24 19.05711 AU direct -90 Nov 13 i 01:15 0°**)** 56'59 conjunction -97 Jan 25 i 13:07 2°≈59'33 0°-38'-5 -97 Jan 25 j 13:07 2°≈59'33 0°38'06 -89 Feb 26 j 10:05 4°**¥**49'24 0°-44'-11 minimum elong conjunction max. Earth dist. -97 Jan 26 j 14:58 3°≈03'16 20.99271 AU minimum elong -89 Feb 26 i 10:05 4°**H**49'24 0°44'11 -97 May 15 j 11:52 7°≈01'21 max. Earth dist. -89 Feb 27 j 08:39 4°**)** 52'37 21.05144 AU retrograde -97 Aug 01 j 15:43 5°≈02'12 0°-42'-55 -89 Jun 17 j 08:03 8°**)** 51'48 opposition retrograde 5°≈04'41 19.00428 AU -89 Sep 02 j 08:29 6°**¥**54'23 19.04525 AU min. Earth dist. -97 Jul 31 j 14:54 min. Earth dist. -89 Sep 03 j 04:36 6°**¥**52'21 0°-48'-44 -97 Oct 16 j 09:12 3°≈05'43 direct opposition -89 Nov 17 j 05:07 4°**¥**56′05 direct -96 Jan 29 j 18:10 6°≈58'52 0°-39'-32 conjunction -96 Jan 29 j 18:10 -88 Mar 01 j 16:59 8°\(\)48'44 0°-44'00 minimum elong 6°≈58'52 0°39'33 conjunction -88 Mar 01 j 16:59 -96 Jan 30 j 21:15 8°**)**(48'44 0°44'01 max. Earth dist. 7°≈02'46 21.01398 AU minimum elong -88 Mar 02 j 15:16 -96 May 18 j 20:40 8°**¥**51'54 21.03680 AU retrograde 11°≈00'33 max. Earth dist. -96 Aug 03 j 22:35 -88 Jun 20 j 17:17 12°**¥**51′24 min. Earth dist. 9°≈03'55 19.02377 AU retrograde opposition -96 Aug 05 j 00:13 9°≈01'21 0°-44'-26 opposition -88 Sep 06 j 11:30 10° **★**51'50 0°-48'-25 direct -96 Oct 19 j 16:10 7°≈04'58 min. Earth dist. -88 Sep 05 j 15:39 10°**升**53'50 19.02773 AU direct -88 Nov 20 j 11:50 8°¥55'26 conjunction -95 Feb 01 j 23:13 10°≈57'43 0°-40'-49 -95 Feb 01 j 23:13 10°≈57'43 0°40'50 -87 Mar 06 j 00:14 12°**)**(48'22 0°-43'-36 minimum elong conjunction -95 Feb 03 j 01:22 11°≈01'28 21.03175 AU minimum elong -87 Mar 06 j 00:15 12°**)**(48'22 0°43'36 max. Earth dist. -95 May 23 j 04:34 14°≈59'20 max. Earth dist. -87 Mar 06 j 20:16 12°**升**51'13 21.01665 AU retrograde -95 Aug 08 j 07:41 13°≈02'36 19.03986 AU -87 Jun 25 j 01:38 16°**⊁**51′21 min. Earth dist. retrograde -87 Sep 10 j 18:20 14°**)** 51'38 0°-47'-52 opposition -95 Aug 09 i 08:27 13°≈00'07 0°-45'-43 opposition -87 Sep 10 j 00:42 direct -95 Oct 23 j 21:28 11°≈03'48 min. Earth dist. 14°**)** 53′25 19.00505 AU -87 Nov 24 j 16:07 direct 12°\£55'03 -94 Feb 06 i 04:29 conjunction 14°≈56'16 0°-41'-53 minimum elong -94 Feb 06 i 04:29 14°≈56'16 0°41'54 -86 Mar 10 i 08:02 16°¥48'23 0°-42'-59 conjunction max. Earth dist. -94 Feb 07 i 07:33 15°≈00'09 21.04599 AU minimum elong -86 Mar 10 i 08:02 16°¥48'23 0°43'01 -94 Feb 07 j 06:30 max. Earth dist. -86 Mar 11 j 03:41 16°¥51'11 20.99163 AU 15°≈≈ -94 May 27 j 14:07 -86 Jun 29 j 10:58 20°**)**€51'43 retrograde 18°≈57'52 retrograde -86 Sep 14 j 07:38 opposition -94 Aug 13 j 16:14 16°≈58'38 0°-46'-47 min. Earth dist. 18°**)** 53'35 18.97766 AU min. Earth dist. -94 Aug 12 j 14:57 17°≈01'10 19.05212 AU opposition -86 Sep 15 j 00:59 18°\\$51'49 0°-47'-4 direct -94 Oct 28 j 03:54 15°≈02'24 direct -86 Nov 28 j 22:32 16°**¥**55′02 -93 Feb 10 j 09:45 18°≈54'40 0°-42'-45 -85 Mar 14 j 15:58 20°\(\)\(48'50\) 0°-42'-9 conjunction conjunction -93 Feb 10 j 09:45 -85 Mar 14 j 15:58 20°\(\pm\)48'50 0°42'10 minimum elong 18°≈54'40 0°42'47 minimum elong -93 Feb 11 j 11:34 -85 Mar 15 j 09:28 20°¥51'20 20.96215 AU max. Earth dist. 18°≈58'22 21.05627 AU max. Earth dist. -85 Jul 03 j 19:21 retrograde -93 May 31 j 21:21 22°≈56'20 retrograde 24°**)** 52'35 opposition -93 Aug 17 j 23:50 20°≈57'05 0°-47'-38 opposition -85 Sep 19 j 07:44 22°\dagger52'31 0°-46'-2 min. Earth dist. -93 Aug 16 j 23:52 20°≈59'29 19.06040 AU min. Earth dist. -85 Sep 18 j 16:34 22°\\$54'04 18.94627 AU direct -93 Nov 01 j 08:19 19°≈00'54 direct -85 Dec 03 j 03:17 20°**)** 55′30 -92 Feb 14 j 15:24 22°≈53'05 0°-43'-26 -84 Mar 18 j 00:33 24°**)**(49'53 0°-41'-7 conjunction conjunction -92 Feb 14 j 15:24 22°≈53'05 0°43'27 -84 Mar 18 j 00:34 24°\ 49'53 0°41'08 minimum elong minimum elong

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 22 Attention, astronomical year style is used: The year -84 in astronomical counting style is the year 85 BCE in historical counting style. -84 Mar 18 j 17:44 24°) (52'20 20.92904 AU 27°**Υ**38'06 20.56094 AU max. Earth dist. max. Earth dist. -76 Apr 20 j 23:54 -84 Jul 07 j 05:16 28° ¥ 54'05 -76 Jun 03 j 05:34 0°8 retrograde -84 Sep 22 j 14:22 26°**)** 53'52 0°-44'-47 -76 Aug 10 j 01:44 1°847'07 opposition retrograde -76 Oct 19 j 15:58 -84 Sep 21 j 23:25 30°RY min. Earth dist. 26°**升**55′24 18.91142 AU -84 Dec 06 j 09:46 29°**Υ**46'06 0°-27'-10 24°\ 56'37 -76 Oct 25 j 04:49 direct opposition 29°**Υ**46'21 18.53151 AU min. Earth dist. -76 Oct 25 j 02:26 28°**)** 51'39 0°-39'-53 27°**Y**46'50 -83 Mar 22 j 09:31 -75 Jan 07 j 18:27 conjunction direct -83 Mar 22 j 09:31 0°39'54 -75 Mar 23 j 19:57 minimum elong 28°**)** 51'39 0° 8 -83 Mar 23 j 00:33 max. Earth dist. 28°**₭**53'48 20.89261 AU -83 Apr 11 j 13:15 $0^{\circ}\Upsilon$ conjunction -75 Apr 25 j 11:47 1°**8**50'12 0°-23'-12 2°Y56'22 -75 Apr 25 j 11:47 retrograde -83 Jul 11 j 14:04 minimum elong 1°850'12 0°23'12 -83 Sep 26 j 21:18 0°**Y**56'01 -75 Apr 25 j 12:19 1°850'17 20.50147 AU opposition 0°-43'-19 max. Earth dist. -83 Sep 26 j 08:35 0°Υ′57'19 18.87350 AU -75 Aug 14 j 14:31 min. Earth dist. retrograde 6°800'27 -83 Oct 20 j 13:21 -75 Oct 29 j 14:35 30°**₹** opposition 3°859'18 0°-24'-7 direct -83 Dec 10 j 14:39 28°¥58'32 min. Earth dist. -75 Oct 29 j 15:08 3°859'15 18.47049 AU -82 Jan 29 j 02:57 $0^{\circ}\Upsilon$ direct -74 Jan 12 j 02:52 1°859'40 conjunction -82 Mar 26 j 19:16 2°**Y**'54'20 0°-38'-27 conjunction -74 Apr 30 j 03:49 6°804'19 0°-20'-22 minimum elong -82 Mar 26 j 19:16 2°**Y**54'20 0°38'27 minimum elong -74 Apr 30 j 03:49 6°804'19 0°20'23 max. Earth dist. -82 Mar 27 j 09:44 2°Υ56'24 20.85332 AU max. Earth dist. -74 Apr 30 j 02:19 6°804'06 20.43912 AU retrograde -82 Jul 16 j 00:59 6°Y59'36 retrograde -74 Aug 19 j 06:28 10°**8**15'19 opposition -82 Oct 01 i 04:05 4°**Υ**'59'07 0°-41'-37 opposition -74 Nov 03 i 00:34 8°814'00 0°-20'-55 min. Earth dist. -82 Sep 30 j 15:41 5°**Υ**00'24 18.83276 AU min. Earth dist. -74 Nov 03 j 02:04 8°813'50 18.40683 AU direct -82 Dec 14 j 21:40 3°**Y**01′25 direct -73 Jan 16 j 14:44 6°813'57 -81 Mar 31 j 05:28 6°Υ′58'04 0°-36'-49 -73 May 04 j 20:32 10°819'57 0°-17'-24 conjunction conjunction -81 Mar 31 j 05:28 6°Υ58'04 0°36'50 minimum elong -73 May 04 i 20:32 10°819'57 0°17'25 minimum elong max. Earth dist. -81 Mar 31 j 17:40 6°**Y**59'49 20.81129 AU max. Earth dist. -73 May 04 j 16:40 10°819'24 20.37438 AU -81 Jul 20 j 10:22 11°Y03'57 retrograde -73 Aug 23 j 19:45 14°**8**31'42 retrograde -81 Oct 05 j 11:25 9°**Υ**'03'22 0°-39'-43 -73 Nov 07 j 11:15 opposition 12°**8**30'13 0°-17'-34 opposition -81 Oct 05 j 01:20 -73 Nov 07 j 15:28 9°**Υ**04'25 18.78947 AU min. Earth dist. 12°**8**29'46 18.34126 AU min. Earth dist. -81 Dec 19 j 02:47 7°**℃**05'27 -72 Jan 21 j 00:23 10°**8**29'45 direct direct -80 Apr 03 j 16:23 11°Υ03'01 0°-34'-59 -72 May 08 j 13:59 14°**8**37'07 0°-14'-20 conjunction conjunction -80 Apr 03 j 16:23 -72 May 08 j 13:59 11° \(\gamma \) 03'01 0°34'59 14°**8**37'07 0°14'21 minimum elong minimum elong -80 Apr 04 j 03:50 -72 May 08 j 11:06 11°**Υ**04'40 20.76685 AU 14°**8**36'42 max. Earth dist. behind sun begin -80 Jul 23 j 22:41 -72 May 08 j 16:53 15°**Y**09'34 14°**8**37'32 retrograde behind sun end opposition -80 Oct 08 j 18:53 13°Υ08'54 0°-37'-36 max. Earth dist. -72 May 08 j 08:08 14°836'16 20.30826 AU min. Earth dist. -80 Oct 08 j 09:14 13°**Y**09'54 18.74365 AU -72 May 15 j 01:47 15°8 direct -80 Dec 22 j 10:27 11°**Υ**10'46 retrograde -72 Aug 27 j 12:36 18°**8**49'39 opposition -72 Nov 10 j 22:17 16°847'58 0°-14'-6 -79 Apr 08 j 04:07 15°Υ09'22 0°-32'-59 min. Earth dist. -72 Nov 11 j 03:22 16°**8**47'26 18.27458 AU conjunction -79 Apr 08 j 04:07 15°Υ09'22 0°33'00 -71 Jan 02 j 07:37 15°R₩ minimum elong max. Earth dist. -79 Apr 08 j 13:10 15°**Υ**10'39 20.71975 AU -71 Jan 24 j 13:46 14°**8**47'03 direct retrograde -79 Jul 28 j 09:18 19°**Y**16'36 -71 Feb 15 j 16:21 15°8 -79 Oct 13 j 02:43 17°Υ15'52 0°-35'-17 opposition -79 Oct 12 j 19:45 -71 May 13 j 08:23 18°855'51 0°-11'-10 min. Earth dist. 17°**Y**16'36 18.69521 AU conjunction -79 Dec 26 j 16:30 -71 May 13 j 08:23 direct 15°**Y**17'29 minimum elong 18°**8**55'51 0°11'11 -71 May 13 j 03:27 18°**8**55'09 behind sun begin -78 Apr 12 j 16:52 19°**Y**17'12 0°-30'-47 behind sun end -71 May 13 i 13:19 18°856'34 conjunction -78 Apr 12 j 16:52 19°**Y**17'12 0°30'48 max. Earth dist. -71 May 13 i 00:34 18°854'43 20.24118 AU minimum elong max. Earth dist. -78 Apr 13 j 00:35 19°**Y**18'19 20.66998 AU retrograde -71 Sep 01 j 02:51 23°809'09 -78 Aug 01 j 22:53 23°Y25'10 opposition -71 Nov 15 j 09:55 21°807'19 0°-10'-33 retrograde -78 Oct 17 j 10:54 21°\bar{\gamma}24'22 0°-32'-46 opposition min. Earth dist. -71 Nov 15 j 17:32 21°806'30 18.20741 AU 21°**Υ**25'01 18.64386 AU min. Earth dist. -78 Oct 17 j 04:43 direct -70 Jan 29 j 01:02 19°**8**05'58 19°**Y**25'44 direct -78 Dec 31 j 01:02 conjunction -70 May 18 j 03:30 23°816'13 0°-7'-56 -77 Apr 17 j 06:10 23°**Y**'26'37 0°-28'-25 minimum elong -70 May 18 j 03:29 23°**8**16'13 0°07'56 conjunction -77 Apr 17 j 06:10 23°**Y**26'37 0°28'26 behind sun begin -70 May 17 j 21:27 23°**8**15'21 minimum elong -77 Apr 17 j 11:16 23°**Υ**27'20 20.61703 AU -70 May 18 j 09:32 23°**8**17'05 max. Earth dist. behind sun end -77 Aug 06 j 10:54 27°**Y**35'21 -70 May 17 j 17:36 23°**8**14'46 20.17413 AU retrograde max. Earth dist. -77 Oct 21 j 19:44 opposition 25°**Y**34'27 0°-30'-3 retrograde -70 Sep 05 j 20:33 27°**8**30'18 min. Earth dist. -77 Oct 21 j 16:23 25°**Y**34'48 18.58933 AU opposition -70 Nov 19 j 22:09 25°**8**28'19 0°-6'-54 direct -76 Jan 04 j 08:19 23°**Y**35'32 min. Earth dist. -70 Nov 20 j 06:28 25°**8**27'25 18.14060 AU direct -69 Feb 02 j 15:43 23°**8**26'33 -76 Apr 20 j 20:35 27°**Y**37'37 0°-25'-53 conjunction -76 Apr 20 j 20:35 27°**Y**37'37 0°25'54 -69 May 22 j 23:14 27°**8**38'18 0°-4'-38 minimum elong conjunction

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -69 in astronomical counting style is the year 70 BCE in historical counting style. -69 May 22 j 23:15 27°**8**38'18 0°04'39 -63 Jun 18 j 18:54 minimum elong max. Earth dist. 24°**I**128'01 19.74274 AU behind sun begin -69 May 22 j 16:37 27°837'20 retrograde -63 Oct 07 j 07:46 28°II50'37 behind sun end -69 May 23 j 05:53 27°**8**39'15 opposition -63 Dec 20 j 08:07 26°II48'25 0°19'13 max. Earth dist. -69 May 22 j 12:01 27°**8**36'39 20.10758 AU min. Earth dist. -63 Dec 21 j 02:36 26°**П**46'25 17.71520 AU -69 Jul 03 j 22:59 -62 Mar 05 j 12:57 24°**Ⅱ**44'21 $0^{\circ}\Pi$ direct -69 Sep 10 j 12:08 1°**I**I53′10 retrograde -69 Nov 20 j 23:53 -62 Jun 24 j 17:04 29°II06'47 0°18'55 30°₽8 conjunction 29°**I**106'47 0°18'55 opposition -69 Nov 24 j 11:10 29°**8**51'04 0°-3'-12 -62 Jun 24 j 17:04 minimum elong -69 Nov 24 j 21:38 29°**8**49'56 18.07464 AU -62 Jun 23 j 17:26 29°**Д**03'11 19.68796 AU min. Earth dist. max. Earth dist. 27°**8**48'54 -62 Jul 09 j 07:51 direct -68 Feb 07 j 04:41 000 -62 Oct 12 j 05:12 -68 Apr 21 j 06:42 $0^{\circ}\Pi$ retrograde 3°526'52 -62 Dec 25 j 02:26 opposition 1°**5**24'39 0°22'47 -68 May 26 j 19:54 2°**I**02'10 0°-1'-15 -62 Dec 25 j 22:11 1°522'30 17.66146 AU conjunction min. Earth dist. -68 May 26 j 19:55 minimum elong 2°**I**02'10 0°01'15 -61 Jan 29 j 19:30 30°R∏ behind sun begin -68 May 26 j 13:08 2°**I**101'11 direct -61 Mar 10 j 09:40 29°**Ⅲ**20'14 behind sun end -68 May 27 j 02:42 2°II03'09 -61 Apr 18 j 09:45 0ಂತಾ max. Earth dist. -68 May 26 j 06:29 2°**Д**00'11 20.04237 AU retrograde -68 Sep 14 j 06:51 6°**Ⅱ**17'50 conjunction -61 Jun 29 j 18:59 3°544'02 0°22'03 asc. node -68 Oct 06 j 20:03 6°**Ⅱ**04'28 minimum elong -61 Jun 29 j 18:59 3°5544'02 0°22'03 opposition -68 Nov 28 j 00:38 4°**П**15'39 0°00'32 max. Earth dist. -61 Jun 28 j 19:07 3°540'23 19.63513 AU min. Earth dist. -68 Nov 28 j 11:50 4°**Ⅱ**14'27 18.01023 AU retrograde -61 Oct 17 j 03:16 8°904'40 direct -67 Feb 10 j 20:29 2°**Ⅱ**13'07 opposition -61 Dec 29 i 21:28 6°502'26 0°26'13 min. Earth dist. -61 Dec 30 j 18:12 6°500'10 17.60974 AU conjunction -67 May 31 j 17:33 6°II27'57 0°02'14 direct -60 Mar 14 i 07:04 3°957'41 minimum elong -67 May 31 j 17:33 6°**Ⅲ**27'57 0°02'14 behind sun begin -67 May 31 j 10:46 6°**Ⅲ**26′58 -60 Jul 03 j 21:23 8°922'46 0°25'03 conjunction behind sun end -67 Jun 01 j 00:20 6°**Ⅲ**28'56 -60 Jul 03 j 21:23 8°922'46 0°25'04 minimum elong max. Earth dist. -67 May 31 j 03:06 6°**I**I25'48 19.97872 AU max. Earth dist. -60 Jul 02 j 19:05 8°518'44 19.58468 AU -67 Sep 19 j 00:10 10°**Ⅱ**44'24 retrograde -60 Oct 21 j 01:40 12°543'54 retrograde -67 Dec 02 j 15:03 -59 Jan 02 j 17:03 8°**II**42'11 0°04'18 opposition 10°5541'36 0°29'29 opposition -67 Dec 03 j 04:10 8°**Ⅱ**40'46 17.94752 AU -59 Jan 03 j 15:10 min. Earth dist. 10°539'12 17.56082 AU min. Earth dist. -66 Feb 15 j 11:32 6°**Ⅱ**39'19 -59 Mar 19 j 04:59 direct direct 8°936'32 max. Earth dist. -59 Jul 07 j 22:04 12°958'46 19.53726 AU 10°Д55'43 0°05'38 -66 Jun 05 j 15:46 conjunction -66 Jun 05 j 15:46 -59 Jul 09 j 00:19 10°**耳**55'43 0°05'38 13°902'49 0°27'55 minimum elong conjunction -66 Jun 05 j 09:15 -59 Jul 09 j 00:19 10°**I**54'45 behind sun begin minimum elong 13°**©**02'49 0°27'54 -66 Jun 05 j 22:16 -59 Oct 26 j 00:35 10°**I**56'40 behind sun end retrograde 17°9524'22 max. Earth dist. -66 Jun 04 j 22:56 10°**耳**53'11 19.91702 AU opposition -58 Jan 07 j 13:25 15°522'02 0°32'35 -58 Jan 08 j 11:52 retrograde -66 Sep 23 j 19:39 15°**Ⅲ**12'58 min. Earth dist. 15°519'35 17.51510 AU -66 Dec 07 j 06:05 opposition 13°II10'44 0°08'05 direct -58 Mar 24 j 03:47 13°9516'39 min. Earth dist. -66 Dec 07 j 20:03 13°**Д**09'13 17.88684 AU max. Earth dist. -58 Jul 12 j 23:20 17°539'41 19.49340 AU -65 Feb 20 j 04:38 11°**II**07'33 direct conjunction -58 Jul 14 j 03:13 17°5944'00 0°30'35 -65 Jun 10 j 14:59 15°**Ⅲ**25'32 0°09'01 minimum elong -58 Jul 14 j 03:12 17°5544'00 0°30'36 conjunction -65 Jun 10 j 14:59 15°**I**I25'32 0°09'01 retrograde -58 Oct 30 j 23:17 22°905'56 minimum elong -65 Jun 10 j 09:14 15°**Ⅲ**24'41 -57 Jan 12 j 10:27 behind sun begin opposition 20°503'32 0°35'28 -65 Jun 10 j 20:43 15°**Ⅲ**26'22 behind sun end min. Earth dist. -57 Jan 13 j 10:03 20°500'57 17.47344 AU -65 Jun 09 j 21:28 15°**Ⅲ**22'54 19.85720 AU -57 Mar 29 i 02:42 max. Earth dist. direct 17°957'50 -65 Sep 28 j 14:47 retrograde 19°**Ⅱ**43'33 max. Earth dist. -57 Jul 18 j 02:59 22°521'55 19.45392 AU opposition -65 Dec 11 i 21:56 17°**Ⅱ**41'20 0°11'51 min. Earth dist. -65 Dec 12 j 13:42 17°**I**I39'37 17.82796 AU conjunction -57 Jul 19 i 06:30 22°526'11 0°33'04 direct -64 Feb 24 j 22:07 15°**Ⅲ**37'52 minimum elong -57 Jul 19 i 06:30 22°926'11 0°33'04 retrograde -57 Nov 04 j 22:35 26°9548'24 19°**I**57'23 0°12'22 -56 Jan 17 j 07:53 conjunction -64 Jun 14 j 14:52 opposition 24°9545'58 0°38'07 -64 Jun 14 j 14:51 19°**I**57'23 0°12'22 -56 Jan 18 j 07:08 24°5643'25 17.43631 AU minimum elong min. Earth dist. -64 Jun 14 j 10:31 19°**Ⅱ**56'44 behind sun begin direct -56 Apr 02 j 03:27 22°9540'01 -64 Jun 14 j 19:12 19°**Ⅲ**58'01 behind sun end max. Earth dist. -56 Jul 22 j 05:37 27°504'50 19.41926 AU max. Earth dist. -64 Jun 13 j 18:37 19°**I**54'19 19.79922 AU retrograde -64 Oct 02 j 11:06 24°**I**16′09 -56 Jul 23 j 09:55 27°509'14 0°35'20 conjunction -64 Dec 15 j 14:37 22°**I**13'56 0°15'34 minimum elong -56 Jul 23 j 09:55 27°509'14 0°35'20 opposition -64 Dec 16 j 07:35 22°**Ⅱ**12'06 17.77085 AU -56 Sep 10 j 20:43 $0^{\circ}\Omega$ min. Earth dist. -63 Feb 28 j 17:07 -56 Nov 08 j 20:55 direct 20°**Ⅱ**10′09 retrograde 1°**Ω**31'42 -55 Jan 09 j 09:35 30°Rூ conjunction -63 Jun 19 j 15:45 24°**Ⅲ**31'11 0°15'41 opposition -55 Jan 21 j 06:09 29°529'14 0°40'31 minimum elong -63 Jun 19 j 15:45 24°**Ⅲ**31'11 0°15'42 min. Earth dist. -55 Jan 22 j 06:23 29°526'35 17.40443 AU behind sun begin -63 Jun 19 j 15:17 24°**Ⅲ**31'07 direct -55 Apr 07 j 03:25 27°523'04

-55 Jun 27 j 10:25

 $0^{\circ}\Omega$

behind sun end

-63 Jun 19 j 16:12

24°**II**31'15

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•			•	* *	J /-Dez-201/14:4		24
					6 BCE in historical cour		0040157
max. Earth dist.	-55 Jul 27 j 09:32	1° 3′ 48'42	19.39013 AU	opposition	-47 Feb 28 j 09:42	7° Mp 34'55	
	55 X 1	10.0.53103	000 5100	min. Earth dist.	-47 Mar 01 j 06:24		17.35156 AU
conjunction	-55 Jul 28 j 13:23	1° Ω 53'03		direct	-47 May 16 j 02:58	5° m 28'49	
minimum elong	-55 Jul 28 j 13:23	1° Ω 53'03	0°37'22				
retrograde	-55 Nov 13 j 20:44	6° Ω 15'42		conjunction	-47 Sep 05 j 13:16	10° mp 00'24	
opposition	-54 Jan 26 j 04:52	4°Ω13'15		minimum elong	-47 Sep 05 j 13:16	10° mp 00'24	0°43'44
min. Earth dist.	-54 Jan 27 j 04:04		17.37817 AU	max. Earth dist.	-47 Sep 04 j 14:17		19.35829 AU
direct	-54 Apr 12 j 06:05	2° Ω 06'56		retrograde	-47 Dec 21 j 20:05	14° m 22'21	
				opposition	-46 Mar 05 j 11:37	12° m) 20'44	0°48'31
conjunction	-54 Aug 02 j 16:55	6° Ω 37'34		min. Earth dist.	-46 Mar 06 j 06:47	-	17.36696 AU
minimum elong	-54 Aug 02 j 16:55	6° Ω 37'34		direct	-46 May 21 j 06:34	10° m) 14'45	
max. Earth dist.	-54 Aug 01 j 13:16		19.36682 AU				
retrograde	-54 Nov 18 j 19:15	11°Ω00'21		conjunction	-46 Sep 10 j 14:42	14° m 45'53	0°43'12
opposition	-53 Jan 31 j 04:16	8° Ω 57'58		minimum elong	-46 Sep 10 j 14:42	14° m/45'53	0°43'12
min. Earth dist.	-53 Feb 01 j 04:10		17.35801 AU	max. Earth dist.	-46 Sep 09 j 18:07	14° m 42'38	19.37591 AU
direct	-53 Apr 17 j 07:00	6° Ω 51'33		retrograde	-46 Dec 26 j 19:48	19° m 07'23	
		_		opposition	-45 Mar 10 j 13:31	17° m 05'51	0°47'44
conjunction	-53 Aug 07 j 20:19	11° Ω 22'44		min. Earth dist.	-45 Mar 11 j 07:55		17.38671 AU
minimum elong	-53 Aug 07 j 20:19	11° Ω 22'44		direct	-45 May 26 j 10:24	15° Mp 00'01	
max. Earth dist.	-53 Aug 06 j 16:59		19.34974 AU				
	-53 Oct 14 j 03:39	15° Ω		conjunction	-45 Sep 15 j 15:17	19° Mp 30'31	0°42'21
retrograde	-53 Nov 23 j 19:51	15° Ω 45'37		minimum elong	-45 Sep 15 j 15:17	19° m 30'31	0°42'22
	-52 Jan 04 j 12:00	15°R Ω		max. Earth dist.	-45 Sep 14 j 19:04	~	19.39801 AU
opposition	-52 Feb 05 j 04:01	13° Ω 43'19		retrograde	-45 Dec 31 j 18:27	23° m 51'32	
min. Earth dist.	-52 Feb 06 j 02:37		17.34381 AU	opposition	-44 Mar 14 j 15:22	21° m 50'03	
direct	-52 Apr 21 j 10:47	11° Ω 36'53		min. Earth dist.	-44 Mar 15 j 08:19		17.41109 AU
	-52 Jul 24 j 15:00	15° Ω		direct	-44 May 30 j 13:17	19° m 44'21	
conjunction	-52 Aug 11 j 23:52	16° Ω 08'30		conjunction	-44 Sep 19 j 15:14	24° m) 14'07	
minimum elong	-52 Aug 11 j 23:51	16° Ω 08'30		minimum elong	-44 Sep 19 j 15:14	24° m 14'07	0°41'13
max. Earth dist.	-52 Aug 10 j 21:28		19.33840 AU	max. Earth dist.	-44 Sep 18 j 21:43	24° Mp 11'21	19.42474 AU
retrograde	-52 Nov 27 j 18:47	20° Ω 31'23		retrograde	-43 Jan 04 j 17:31	28° m 34'34	
opposition	-51 Feb 09 j 04:23	18° Ω 29'14	0°47'18	opposition	-43 Mar 19 j 17:08	26° Mp 33'08	0°45'13
min. Earth dist.	-51 Feb 10 j 03:38	18° Ω 26'42	17.33533 AU	min. Earth dist.	-43 Mar 20 j 08:31	26° Mp 31'29	17.44008 AU
direct	-51 Apr 26 j 12:24	16° Ω 22'49		direct	-43 Jun 04 j 18:03	24° m 27'37	
max. Earth dist.	-51 Aug 16 j 00:47	20° Ω 50'35	19.33271 AU				
				conjunction	-43 Sep 24 j 14:14	28° m 56'29	0°39'49
conjunction	-51 Aug 17 j 03:10	20° Ω 54'44		minimum elong	-43 Sep 24 j 14:14	28° m 56'29	0°39'50
minimum elong	-51 Aug 17 j 03:09	20° Ω 54'44	0°42'53	max. Earth dist.	-43 Sep 23 j 21:48	28° m 53'54	19.45628 AU
retrograde	-51 Dec 02 j 20:01	25° Ω 17'35			-43 Oct 11 j 13:15	0∘ 亚	
opposition	-50 Feb 14 j 05:10	23° Ω 15'33	0°48'13	retrograde	-42 Jan 09 j 14:16	3° ≙ 16′20	
min. Earth dist.	-50 Feb 15 j 02:59	23° Ω 13'11	17.33224 AU	opposition	-42 Mar 24 j 18:45	1° ≙ 14'57	0°43'30
direct	-50 May 01 j 16:55	21° Ω 09'12		min. Earth dist.	-42 Mar 25 j 08:35	1° ≏ 13′28	17.47425 AU
max. Earth dist.	-50 Aug 21 j 05:27	25° Ω 37'22	19.33208 AU		-42 Apr 25 j 04:54	30°R, Mp	
				direct	-42 Jun 09 j 20:33	29° m 09'37	
conjunction	-50 Aug 22 j 06:12	25° Ω 41'16	0°43'33		-42 Jul 24 j 05:37	0∘ ত	
minimum elong	-50 Aug 22 j 06:12		0°43'33				
	-50 Nov 25 j 23:06	0° m)		conjunction	-42 Sep 29 j 12:24	3° ≏ 37'30	0°38'10
retrograde	-50 Dec 07 j 19:19	0° My $04'00$		minimum elong	-42 Sep 29 j 12:24	3° ≏ 37'30	
	-50 Dec 19 j 19:26	30° R Ω		max. Earth dist.	-42 Sep 28 j 22:49	3° ≏ 35'22	19.49307 AU
opposition	-49 Feb 19 j 06:29	28° Ω 02'06		retrograde	-41 Jan 14 j 12:11	7° ≙ 56'43	
min. Earth dist.	-49 Feb 20 j 04:41	27° Ω 59'41	17.33408 AU	opposition	-41 Mar 29 j 20:03	5° ≙ 55'24	0°41'30
direct	-49 May 06 j 19:23	25° Ω 55'49		min. Earth dist.	-41 Mar 30 j 07:31	5° ≙ 54'11	17.51347 AU
	-49 Aug 19 j 23:58	0° m)		direct	-41 Jun 15 j 01:02	3° ≙ 50′20	
max. Earth dist.	-49 Aug 26 j 08:00	0° m/23′56	19.33634 AU				
				conjunction	-41 Oct 04 j 09:47	8° ≏ 17'08	0°36'16
conjunction	-49 Aug 27 j 08:57	0° Mp 27′52	0°43'55	minimum elong	-41 Oct 04 j 09:48	8° ≏ 17'08	0°36'15
minimum elong	-49 Aug 27 j 08:57	0° Mp 27′52	0°43'54	max. Earth dist.	-41 Oct 03 j 21:49		19.53493 AU
retrograde	-49 Dec 12 j 20:12	4° Mp 50′25		retrograde	-40 Jan 19 j 07:41	12° ≏ 35'40	
opposition	-48 Feb 24 j 07:50	2° m/48'37	0°49'03	opposition	-40 Apr 02 j 21:01	10° ≏ 34'27	0°39'15
min. Earth dist.	-48 Feb 25 j 04:37	2° Mp 46'22	17.34064 AU	min. Earth dist.	-40 Apr 03 j 07:03	10° ≏ 33'24	17.55793 AU
direct	-48 May 10 j 23:45	0° Mp 42′25		direct	-40 Jun 19 j 02:06	8° ≏ 29'41	
conjunction	-48 Aug 31 j 11:31	5° Mp 14'20	0°43'59	conjunction	-40 Oct 08 j 06:25	12° ≏ 55'20	0°34'08
minimum elong	-48 Aug 31 j 11:31	5° Mp 14'20	0°43'59	minimum elong	-40 Oct 08 j 06:25	12° ≙ 55′20	0°34'08
max. Earth dist.	-48 Aug 30 j 12:33		19.34510 AU	max. Earth dist.	-40 Oct 07 j 21:01		19.58194 AU
retrograde	-48 Dec 16 j 19:55	9° m 36'36		retrograde	-39 Jan 23 j 04:58	17° ≙ 13'10	

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -39 in astronomical counting style is the year 40 BCE in historical counting style. -39 Apr 07 j 21:45 15°**£**12'07 0°36'45 opposition conjunction -32 Nov 12 j 21:16 19°M04'19 0°11'14 -39 Apr 08 i 04:57 min. Earth dist. 15°**2**11'21 17.60710 AU minimum elong -32 Nov 12 j 21:17 19°M04'19 0°11'13 -39 Jun 24 j 04:55 13°**♀**07'42 behind sun begin -32 Nov 12 j 16:23 19°ML03'35 direct behind sun end -32 Nov 13 j 02:11 19°ML05'03 -32 Nov 13 j 03:00 -39 Oct 13 j 02:03 17°**♀**32'07 0°31'48 max. Earth dist. 19°ML05'10 20.05964 AU conjunction -39 Oct 13 j 02:03 -31 Feb 28 j 08:33 17°**♀**32'07 0°31'47 minimum elong retrograde 23°M15'49 -39 Oct 12 j 18:47 17°**♀**30'59 -31 May 15 j 11:14 max. Earth dist. 19.63335 AU opposition 21°M15'50 0°10'37 -38 Jan 27 j 23:59 21°**₽**49'14 -31 May 15 j 03:34 retrograde min. Earth dist. 21°ML16'37 18.09117 AU -31 Jul 31 j 15:56 -38 Apr 12 j 22:15 0°34'02 opposition 19°**≙**48'20 direct 19°**M**₊14'30 -38 Apr 13 j 04:13 19°**≏**47'42 17.66056 AU min. Earth dist. -38 Jun 29 j 04:29 direct 17°**£**44'19 conjunction -31 Nov 17 j 10:19 23°M27'14 0°07'57 -31 Nov 17 j 10:19 minimum elong 23°M27'14 0°07'57 -38 Oct 17 j 21:00 22°**2**07'25 0°29'16 -31 Nov 17 j 04:26 $23^{\circ}\text{ML}26'22$ conjunction behind sun begin -38 Oct 17 j 21:00 -31 Nov 17 j 16:12 minimum elong 22°**♀**07'25 0°29'17 behind sun end 23° ML28'07-38 Oct 17 j 15:52 -31 Nov 17 j 18:48 max. Earth dist. 22°**♀**06'37 19.68870 AU max. Earth dist. 23°M28'31 20.12301 AU retrograde -37 Feb 01 j 20:46 26°**£**23'47 retrograde -30 Mar 04 j 22:34 27° M $_{3}7'55$ opposition -37 Apr 17 j 22:01 24°**£**23'04 0°31'06 opposition -30 May 20 j 07:12 25°M37'59 0°06'56 min. Earth dist. -37 Apr 18 j 01:08 24°**£**22'45 17.71740 AU min. Earth dist. -30 May 19 j 22:40 25°M38'51 18.15452 AU direct -37 Jul 04 j 05:19 22°**₽**19'26 direct -30 Aug 05 j 10:24 23°M36'59 conjunction -37 Oct 22 j 15:10 26°**-**41'12 0°26'35 conjunction -30 Nov 21 j 22:26 27°M48'10 0°04'40 minimum elong -37 Oct 22 j 15:10 26°**♀**41'12 0°26'34 minimum elong -30 Nov 21 j 22:27 27°M48'10 0°04'39 max. Earth dist. -37 Oct 22 j 12:17 26°**♀**40'45 19.74696 AU behind sun begin -30 Nov 21 j 16:03 27°ML47'13 -37 Dec 22 j 09:17 0°M behind sun end -30 Nov 22 i 04:51 27°ML49'07 retrograde -36 Feb 06 i 15:07 0°M56'47 max. Earth dist. -30 Nov 22 i 07:52 27° ML 49'35 20.18645 AU -36 Mar 26 j 02:11 30°R**≏** -30 Dec 29 i 23:00 0°**∡**¹ -36 Apr 21 j 21:42 28°**♀**56'15 0°28'00 -29 Mar 09 j 14:30 1°**×**758'01 opposition retrograde min. Earth dist. -36 Apr 21 j 23:55 28°**♀**56'01 17.77692 AU -29 May 24 j 07:43 30°RML direct -36 Jul 08 j 03:30 26°**♀**53'02 opposition -29 May 25 j 02:06 29°ML58'07 0°03'16 -36 Oct 06 j 08:59 -29 May 24 j 14:59 min. Earth dist. 29°M59'15 18.21806 AU 0°M -29 Aug 10 j 05:36 27°M57'26 direct -36 Oct 26 j 08:23 -29 Oct 20 j 17:25 1°ML13'22 0°23'43 0°⊀ conjunction -36 Oct 26 j 08:23 minimum elong 1°M13'22 0°23'43 -36 Oct 26 j 07:10 2°**∡**107'07 0°01'19 -29 Nov 26 j 09:54 max. Earth dist. 1°ML13'11 19.80758 AU conjunction -35 Feb 10 j 11:21 -29 Nov 26 j 09:54 5°M28'10 2°**҂**07'07 0°01'19 retrograde minimum elong -35 Apr 26 j 20:46 -29 Nov 26 j 03:22 3°M27'47 0°24'44 behind sun begin 2°**х**¹06′10 opposition -29 Nov 26 j 16:26 2°**₹**08'05 -35 Apr 26 j 20:03 3°M27'51 17.83832 AU behind sun end min. Earth dist. direct -35 Jul 13 j 03:18 1°M24'58 max. Earth dist. -29 Nov 26 j 22:15 2°**₹**08'59 20.25001 AU retrograde -28 Mar 13 j 03:23 6°**х** 16′10 -35 Oct 31 j 00:55 -28 Apr 17 j 18:21 conjunction 5°M43'50 0°20'44 desc. node 5°**х¹**45′27 -35 Oct 31 j 00:55 minimum elong 5°M43'50 0°20'45 opposition -28 May 28 j 20:32 4° ₹ 16'21 0°00'-23 max. Earth dist. -35 Oct 31 j 02:06 5°ML44'01 19.86967 AU min. Earth dist. -28 May 28 j 08:16 4°**҂**17'36 18.28179 AU retrograde -34 Feb 15 j 04:17 9°M57'50 direct -28 Aug 13 j 22:34 2°**х¹**16′01 -34 May 01 j 19:25 7°M57'35 0°21'21 opposition min. Earth dist. -34 May 01 j 17:57 7°M57'44 17.90102 AU conjunction -28 Nov 29 j 20:18 6°**₹**'24'12 0°-2'-3 -34 Jul 18 j 00:24 -28 Nov 29 j 20:19 6°**х** 24′12 0°02'04 direct 5°M55'11 minimum elong -28 Nov 29 j 13:47 6°**х** 23′14 behind sun begin -34 Nov 04 j 16:31 10°M12'32 0°17'39 -28 Nov 30 i 02:51 6°**х** 25′09 conjunction behind sun end -34 Nov 04 j 16:31 -28 Nov 30 i 09:37 minimum elong 10°ML12'32 0°17'38 max. Earth dist. 6° ₹26'12 20.31391 AU -34 Nov 04 i 18:51 max. Earth dist. 10°ML12'54 19.93279 AU retrograde -27 Mar 17 i 17:57 10°**₹**32'31 -33 Feb 19 i 23:31 retrograde 14°ML25'43 opposition -27 Jun 02 i 14:11 8°**₹**32'45 0°-4'-1 opposition -33 May 06 i 17:16 12°ML25'35 0°17'51 min. Earth dist. -27 Jun 01 j 23:22 8° ₹34'16 18.34588 AU min. Earth dist. -33 May 06 j 13:01 12°M26'01 17.96432 AU direct -27 Aug 18 j 15:25 6°**х** 32'47 -33 Jul 22 j 22:52 direct 10°M23'32 -27 Dec 04 j 06:19 10°**₹**39'34 0°-5'-19 conjunction -33 Nov 09 j 07:22 -27 Dec 04 j 06:19 10°**х** 39'34 conjunction 14°ML39'23 0°14'28 minimum elong 0°05'20 -33 Nov 09 j 07:22 -27 Dec 03 j 23:59 10°**∡**³38'38 minimum elong 14°**M**₊39'23 0°14'28 behind sun begin behind sun begin -33 Nov 09 j 04:17 14°M38'55 behind sun end -27 Dec 04 j 12:38 10°**х** 40′29 -33 Nov 09 j 10:28 14°M39'51 max. Earth dist. -27 Dec 04 j 22:31 10°**∡**′41'59 20.37796 AU behind sun end max. Earth dist. -33 Nov 09 j 12:09 14°M40'06 19.99614 AU retrograde -26 Mar 22 j 06:09 14°**∡**°47′09 -33 Nov 14 j 21:35 15°M₀ -26 Jun 07 j 07:00 12°**∡**¹47'30 0°-7'-36 opposition -32 Feb 24 j 14:48 retrograde 18°M51'44 min. Earth dist. -26 Jun 06 j 15:00 12°**✗**′49′07 18.40987 AU opposition -32 May 10 j 14:37 16°ML51'41 0°14'15 direct -26 Aug 23 j 06:39 10°**∡**°47'55 min. Earth dist. -32 May 10 j 09:40 16°M52'12 18.02772 AU -32 Jul 06 j 20:48 15°RM conjunction -26 Dec 08 j 15:29 14°**x** 53'19 0°-8'-30 direct -32 Jul 26 j 18:52 14°M50'01 minimum elong -26 Dec 08 j 15:29 14°**₹**53'19 0°08'31 -32 Aug 15 j 12:23 15°M₀ behind sun begin -26 Dec 08 j 09:45 14°**∡** 52′28

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -26 in astronomical counting style is the year 27 BCE in historical counting style. -26 Dec 08 j 21:14 14°**₹**′54'09 behind sun end min. Earth dist. -18 Jul 10 j 22:39 15°る59'03 18.85026 AU max. Earth dist. -26 Dec 09 i 08:18 14°**₹**55'49 20.44179 AU direct -18 Sep 26 j 04:28 13°**る**59'33 -25 Mar 26 j 19:08 19°**₹**′00'15 retrograde -25 Jun 11 j 23:08 17°**₹**00'43 0°-11'-8 -17 Jan 10 j 01:18 17°**る**55'59 0°-30'-43 opposition conjunction 17°**₹**02'32 18.47342 AU -17 Jan 10 j 01:18 -25 Jun 11 j 05:06 17°る55'59 0°30'45 min. Earth dist. minimum elong -25 Aug 27 j 20:53 -17 Jan 11 j 01:30 17°る59'30 20.86964 AU direct 15°**₹**01'30 max. Earth dist. -17 Apr 29 j 09:10 retrograde 21°る58'47 -17 Jul 15 j 09:47 -25 Dec 13 j 00:10 20°る02'10 18.88860 AU conjunction 19°**∡**05'36 0°-11'-38 min. Earth dist. -25 Dec 13 j 00:10 -17 Jul 16 j 09:46 minimum elong 19°**∡**05'36 0°11'40 opposition 19°**る**59'47 0°-35'-12 -25 Dec 12 j 19:28 behind sun begin 19°**х** 04'55 direct -17 Sep 30 j 12:50 18°る02'48 behind sun end -25 Dec 13 j 04:53 19°**₰**06'17 -25 Dec 13 j 19:40 -16 Jan 14 j 06:55 21°る58'23 0°-32'-53 max. Earth dist. 19°**✗**08'30 20.50474 AU conjunction -24 Mar 30 j 06:55 -16 Jan 14 j 06:55 21°**る**58'23 retrograde 23°**х** 11′54 minimum elong 0°32'54 -16 Jan 15 j 08:45 opposition -24 Jun 15 j 14:41 21°**渘**12'30 0°-14'-34 max. Earth dist. 22°る02'08 20.90590 AU min. Earth dist. -24 Jun 14 j 19:33 21°**∡**14′26 18.53570 AU retrograde -16 May 02 j 18:15 26°る00'48 -16 Jul 19 j 20:18 direct -24 Aug 31 j 10:42 19°**х** 13'41 opposition 24°**る**01'45 0°-37'-29 min. Earth dist. -16 Jul 18 j 19:34 24°る04'13 18.92293 AU conjunction -24 Dec 16 j 08:16 23°**∡**16'30 0°-14'-42 direct -16 Oct 03 j 22:14 22°る04'54 23°**∡**16'30 minimum elong -24 Dec 16 j 08:16 0°14'42 behind sun begin -24 Dec 16 j 05:22 23°**х** 16′05 conjunction -15 Jan 17 j 12:13 25°る59'42 0°-34'-52 behind sun end -24 Dec 16 j 11:10 23°**х** 16′56 minimum elong -15 Jan 17 j 12:13 25°る59'42 0°34'53 max. Earth dist. -24 Dec 17 j 04:04 23°**尽**19'27 20.56628 AU max. Earth dist. -15 Jan 18 j 13:29 26°る03'21 20.93845 AU retrograde -23 Apr 03 j 18:45 27°×22'13 -15 Apr 28 j 12:32 0°≈ min. Earth dist. -23 Jun 19 j 08:59 25° ₹25'01 18.59639 AU retrograde -15 May 07 i 02:58 0°≈01'49 opposition -23 Jun 20 j 05:36 25°**∡**¹22'57 0°-17'-55 -15 May 15 j 19:12 30°Rる direct -23 Sep 04 j 22:51 23°×24'30 min. Earth dist. -15 Jul 23 j 05:37 28°る05'10 18.95391 AU -15 Jul 24 j 06:16 28°**る**02'42 0°-39'-34 opposition -23 Dec 20 j 16:02 27°**×**⁷26'07 0°-17'-40 direct -15 Oct 08 j 04:47 26°る05'57 conjunction -23 Dec 20 j 16:02 27°**₹**26'07 0°17'41 minimum elong -23 Dec 21 j 14:09 max. Earth dist. 27°**✗**¹29'23 20.62571 AU -14 Jan 21 j 17:31 0°≈00'05 0°-36'-40 conjunction -22 Feb 05 j 10:33 minimum elong -14 Jan 21 j 17:31 0°36'42 0°ಕ 0°≈00'05 -22 Apr 08 j 05:51 0°**≈** 1°**る**31'16 -14 Jan 21 j 16:57 retrograde 0°≈03'57 20.96767 AU -22 Jun 13 j 03:38 -14 Jan 22 j 20:18 30°R x⁷ max. Earth dist. -22 Jun 24 j 19:51 -14 May 11 j 11:41 29°**2**32'08 0°-21'-9 4°≈01'56 opposition retrograde -22 Jun 23 j 22:22 29°**尽**34'17 18.65448 AU -14 Jul 28 j 15:37 2°≈02'47 0°-41'-28 min. Earth dist. opposition -22 Sep 09 j 11:04 27°**х** 34′02 min. Earth dist. -14 Jul 27 j 14:15 direct 2°≈05'20 18.98146 AU -22 Nov 27 j 14:18 0°ಕ -14 Oct 12 j 13:11 direct 0°≈06'09 conjunction -22 Dec 24 j 23:20 1°る34'30 0°-20'-32 conjunction -13 Jan 25 j 22:30 3°≈59'43 0°-38'-18 -22 Dec 24 j 23:20 minimum elong 1°る34'30 0°20'34 minimum elong -13 Jan 25 j 22:30 3°≈59'43 0°38'18 max. Earth dist. -22 Dec 25 j 21:16 1°る37'43 20.68229 AU max. Earth dist. -13 Jan 27 j 00:31 4°≈03'28 20.99357 AU retrograde -21 Apr 12 j 17:03 5°る39'07 retrograde -13 May 15 j 20:05 8°≈01'24 -21 Jun 28 j 11:06 3°る42'18 18.70952 AU min. Earth dist. -13 Jul 31 j 23:33 6°≈04'44 19.00581 AU min. Earth dist. -21 Jun 29 j 09:24 3°る40'04 0°-24'-16 -13 Aug 02 j 00:35 6°≈02'13 0°-43'-9 opposition opposition direct -21 Sep 13 j 21:58 1°**る**42'16 direct -13 Oct 16 j 18:27 4°≈05'42 -21 Dec 29 i 06:27 5°る41'40 0°-23'-17 -12 Jan 30 i 03:38 7°≈58'47 0°-39'-44 conjunction conjunction -21 Dec 29 i 06:26 5°る41'40 0°23'18 -12 Jan 30 i 03:38 7°≈58'47 0°39'45 minimum elong minimum elong -21 Dec 30 i 06:13 5°る45'09 20.73541 AU max. Earth dist. max. Earth dist. -12 Jan 31 i 06:57 8°≈02'43 21.01623 AU retrograde -20 Apr 16 i 03:22 9°**ප**45'47 retrograde -12 May 19 i 04:38 12°≈00'21 opposition -20 Jul 02 i 22:28 7°る46'49 0°-27'-14 min. Earth dist. -12 Aug 04 j 07:26 10°≈03'45 19.02673 AU min. Earth dist. -20 Jul 01 j 23:27 7°る49'07 18.76069 AU opposition -12 Aug 05 j 09:08 10°≈01'11 0°-44'-37 direct -20 Sep 17 j 08:39 5°₹49'18 direct -12 Oct 20 j 01:47 8°≈04'47 9°**る**47'38 0°-25'-55 -11 Feb 02 j 08:34 conjunction -19 Jan 01 j 12:56 conjunction 11°≈57'30 0°-40'-58 -19 Jan 01 j 12:56 minimum elong 9°**ප**47'38 0°25'56 minimum elong -11 Feb 02 j 08:34 11°≈57'30 0°40'58 -19 Jan 02 j 12:14 max. Earth dist. 9°る51'03 20.78452 AU max. Earth dist. -11 Feb 03 j 10:53 12°≈01'16 21.03540 AU -19 Apr 20 j 14:02 13°る51'18 -11 Apr 03 j 09:04 retrograde 15°≈ 11°る54'41 18.80775 AU -19 Jul 06 j 11:36 retrograde -11 May 23 j 13:29 15°≈59'02 min. Earth dist. -19 Jul 07 j 10:59 11°**る**52'21 0°-30'-4 -11 Jul 14 j 11:01 opposition 15°R≈ -19 Sep 21 j 18:37 9°る55'03 -11 Aug 09 j 17:26 13°≈59'51 0°-45'-53 direct opposition min. Earth dist. -11 Aug 08 j 16:29 14°≈02'21 19.04410 AU conjunction -18 Jan 05 j 19:25 13°る52'25 0°-28'-24 direct -11 Oct 24 j 06:26 12°**≈**03'33 minimum elong -18 Jan 05 j 19:25 13°**る**52'25 0°28'24 -10 Jan 21 j 03:54 15°≈ max. Earth dist. -18 Jan 06 j 20:16 13°る56'03 20.82928 AU -18 Apr 24 j 23:39 17°る55'37 -10 Feb 06 j 13:54 15°≈56'00 0°-42'-1 retrograde conjunction -18 Jul 11 j 22:36 15°る56'40 0°-32'-43 -10 Feb 06 j 13:54 15°≈56'00 0°42'02 opposition minimum elong

Planetary Phenomena of Uranus from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, Attention, astronomical year style is used: The year -10 in astronomical counting style is the year 11 BCE in historical counting style. -10 Feb 07 i 17:06 max. Earth dist. 15°≈59'54 21.05077 AU max. Earth dist. -2 Mar 11 j 13:01 17°**)** €51'50 20.99330 AU -10 May 27 j 21:55 19°≈57'32 -2 Jun 29 j 20:26 21°¥52'19 retrograde retrograde -10 Aug 12 j 23:55 18°≈00'55 19.05735 AU -2 Sep 15 j 10:05 19°**¥**52'27 0°-46'-56 min. Earth dist. opposition -10 Aug 14 j 01:09 17°≈58'23 0°-46'-55 min. Earth dist. -2 Sep 14 j 16:49 19°**)** 54'12 18.97942 AU opposition -10 Oct 28 j 12:45 -2 Nov 29 j 08:09 direct 16°≈02'12 direct 17°**)** 55'41 -9 Feb 10 j 19:12 19°≈54'28 0°-42'-52 -1 Mar 15 j 01:08 21°\dagger49'28 0°-42'-1 conjunction conjunction 21°**)**49'28 0°42'02 -9 Feb 10 j 19:11 -1 Mar 15 j 01:09 minimum elong 19°**≈**54'28 0°42'52 minimum elong 21°**米**51'59 20.96409 AU -1 Mar 15 j 18:43 max. Earth dist. -9 Feb 11 j 20:58 19°≈58'09 21.06190 AU max. Earth dist. retrograde -9 Jun 01 j 07:02 23°≈56'06 retrograde -1 Jul 04 j 04:09 25°**¥**53'11 min. Earth dist. -9 Aug 17 j 08:53 21°≈59'21 19.06626 AU opposition -1 Sep 19 j 16:52 23°**¥**53′09 0°-45'-52 -9 Aug 18 j 08:55 -1 Sep 19 j 01:34 opposition 21°**≈**56′56 0°-47'-44 min. Earth dist. 23°**₭**54'43 18.94850 AU -9 Nov 01 j 17:09 -1 Dec 03 j 12:15 direct 20°≈00'50 direct 21°**)** 56'09 conjunction -8 Feb 15 j 00:47 23°≈53'01 0°-43'-30 conjunction 00 Mar 18 j 09:34 25° **∺** 50'30 0°-40'-57 minimum elong -8 Feb 15 j 00:47 23°**≈**53′01 0°43'31 minimum elong 00 Mar 18 j 09:34 25°\\$50'30 0°40'58 max. Earth dist. -8 Feb 16 j 03:07 23°≈56'47 21.06839 AU max. Earth dist. 00 Mar 19 j 02:59 25°¥52'59 20.93155 AU retrograde -8 Jun 04 j 15:47 27°≈54'47 retrograde 00 Jul 07 j 14:16 29°**)** 54'41 opposition -8 Aug 21 j 16:23 25°**≈**55'37 0°-48'-20 opposition 00 Sep 22 j 23:32 27°**)** 54'30 0°-44'-35 min. Earth dist. -8 Aug 20 j 16:22 25°≈58'02 19.07016 AU min. Earth dist. 00 Sep 22 j 08:28 27°**升**56′02 18.91429 AU direct -8 Nov 04 j 23:02 23°≈59'34 direct 00 Dec 06 j 19:15 25°**)** 57'17 conjunction -7 Feb 18 i 06:40 27°≈51'45 0°-43'-56 conjunction 01 Mar 22 j 18:35 29°**)** 52′18 0°-39'-41 minimum elong -7 Feb 18 i 06:40 27°≈51'45 0°43'57 minimum elong 01 Mar 22 j 18:35 29°**)** €52'18 0°39'42 max. Earth dist. -7 Feb 19 i 07:07 27°≈55'15 21.06966 AU max. Earth dist. 01 Mar 23 i 09:40 29°\\$54'27 20.89586 AU -7 Mar 29 i 16:08 0°**∀** 01 Mar 25 j 00:27 $0^{\circ}\Upsilon$ -7 Jun 09 j 00:33 1°**)** 53'42 01 Jul 11 j 23:02 3°Y56'59 retrograde retrograde -7 Aug 23 j 16:56 opposition 01 Sep 27 j 06:23 1°Y56'39 0°-43'-5 30°R≈ -7 Aug 25 j 23:42 29°≈54'30 0°-48'-41 min. Earth dist. 01 Sep 26 j 17:28 1°**Υ**57'59 18.87715 AU opposition -7 Aug 25 j 01:27 01 Dec 05 j 12:32 min. Earth dist. 29°≈56'44 19.06872 AU 30°**₹** 01 Dec 10 j 23:43 29°**¥**59′13 -7 Nov 09 j 03:42 direct 27°≈58'26 direct 01 Dec 16 j 10:03 $0^{\circ}\Upsilon$ -6 Jan 19 j 23:22 0°**∀** 3°Y'54'59 0°-38'-14 -6 Feb 22 j 13:05 1°**)** 50'43 0°-44'-9 02 Mar 27 j 04:20 conjunction conjunction 02 Mar 27 j 04:20 -6 Feb 22 j 13:05 1°\(\overline{50'43}\) 0°44'10 3°**Υ**54'59 0°38'15 minimum elong minimum elong 02 Mar 27 j 18:59 -6 Feb 23 j 13:30 1°**¥**54'12 21.06533 AU 3°**Y**57'05 20.85735 AU max. Earth dist. max. Earth dist. -6 Jun 13 j 09:56 5°**¥**52'52 02 Jul 16 j 10:00 8°**Y**00'14 retrograde retrograde min. Earth dist. -6 Aug 29 j 08:53 3°**¥**55'48 19.06139 AU opposition 02 Oct 01 j 13:22 5°Υ59'48 0°-41'-22 opposition -6 Aug 30 j 06:49 3°**¥**53'35 0°-48'-49 min. Earth dist. 02 Oct 01 j 00:46 6°Υ01'06 18.83714 AU direct -6 Nov 13 j 09:40 1°**¥**57'28 direct 02 Dec 15 j 06:46 4°Υ02'10 -5 Feb 26 j 19:30 5°**)**49'54 0°-44'-10 03 Mar 31 j 14:25 7°Υ58'45 0°-36'-34 conjunction conjunction -5 Feb 26 j 19:30 5°**)**49'54 0°44'11 03 Mar 31 j 14:25 7°**Υ**58'45 0°36'35 minimum elong minimum elong max. Earth dist. -5 Feb 27 j 17:43 5°**¥**53'04 21.05512 AU max. Earth dist. 03 Apr 01 j 02:43 8°Υ00'31 20.81599 AU -5 Jun 17 j 17:40 9°**¥**52'18 03 Jul 20 j 19:59 12°**Y**04'38 retrograde retrograde -5 Sep 03 i 13:57 7°**)** 52'54 0°-48'-42 03 Oct 05 i 20:49 10°Υ'04'06 0°-39'-26 opposition opposition 03 Oct 05 i 10:31 10°**Y**05'09 18.79438 AU min. Earth dist. -5 Sep 02 i 17:59 7°**)** 54'55 19.04834 AU min. Earth dist. 03 Dec 19 j 11:58 8°Y06'15 direct -5 Nov 17 j 14:31 5°**)** 56'41 direct 12°Υ03'47 0°-34'-43 -4 Mar 02 i 02:28 9°\(\dagger49'19\) 0°-43'-57 04 Apr 04 j 01:34 conjunction conjunction -4 Mar 02 i 02:28 9°**H**49'19 0°43'57 minimum elong 04 Apr 04 j 01:34 12°**Y**′03'47 0°34'45 minimum elong max. Earth dist. -4 Mar 03 j 00:35 9°¥52'29 21.03940 AU max. Earth dist. 04 Apr 04 j 13:11 12°Υ05'27 20.77191 AU -4 Jun 21 j 03:28 13°\ 51'59 retrograde 04 Jul 24 j 08:09 16°**Y**10′18 retrograde -4 Sep 06 j 20:46 04 Oct 09 j 04:17 14°Υ09'42 0°-37'-17 opposition 11°**)** 52'26 0°-48'-20 opposition 14°**Υ**10'42 18.74873 AU min. Earth dist. -4 Sep 06 j 01:09 11°**¥**54'26 19.02992 AU min. Earth dist. 04 Oct 08 j 18:37 12°Υ11'37 direct -4 Nov 20 j 20:54 9°**¥**56′04 direct 04 Dec 22 j 19:40 -3 Mar 06 j 09:34 13°**)**(49'00 0°-43'-31 05 Apr 08 j 13:25 16°Υ10'11 0°-32'-40 conjunction conjunction -3 Mar 06 j 09:34 13°¥49'00 0°43'33 05 Apr 08 j 13:25 16°**Υ**10'11 0°32'41 minimum elong minimum elong -3 Mar 07 j 05:29 13°**¥**51′50 21.01858 AU 05 Apr 08 j 22:20 16°**Y**11'28 20.72472 AU max. Earth dist. max. Earth dist. -3 Jun 25 j 10:45 17°**¥**51′58 05 Jul 28 j 19:13 20° Y 17'25 retrograde retrograde 15°**¥**54'03 19.00679 AU min. Earth dist. -3 Sep 10 j 10:02 opposition 05 Oct 13 j 12:21 18°**Y**16'44 0°-34'-56 opposition -3 Sep 11 j 03:36 15°**¥**52′16 0°-47'-45 min. Earth dist. 05 Oct 13 j 05:25 18°**Y**17'27 18.69990 AU direct -3 Nov 25 j 01:17 13°**¥**55'42 direct 05 Dec 27 j 01:50 16°**Y**18′25 -2 Mar 10 j 17:15 17°**)** 49'00 0°-42'-52 06 Apr 13 j 02:12 20°Υ18'04 0°-30'-27 conjunction conjunction -2 Mar 10 j 17:15 17°**)**49'00 0°42'53 06 Apr 13 j 02:12 20°Y18'04 0°30'28 minimum elong minimum elong